NEW-YORK FARMER,

AND

AMERICAN GARDENER'S MAGAZINE.

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D. K MINOR, and GEO C. SCHAEFFER, } EDITORS AND PROPRIETORS.

FOR MAY, 1837.

NEW SERIES—VOL. V.

NEW-YORK FARMER.

MAY 1, 1837.

There is a beautiful moral in the following effusion from the ever sweet muse of Mrs. S gourney.

THE LADY-BUG AND THE ANT.

The Lady-Bug sat in the rose's heart,
And smiled with pride and scorn,
As she saw a plain drest Ant go by,
With a heavy grain of corn.—
So she drew the curtains of damask round,
And adjusted her silken vest,
Making her glass of a drop of dew,
That lay in the rose's breast;

Then she laughed so loud that the Ant look'd up,
And seeing her haughty face,
Took no more notice, but travell'd on
At the same industrious pace:—
But a sudden blast of Autumn came,
And rudely swept the ground,
And now the rose with the Lady Bug bent,
And scater'd its leaves around.

Then the houseless lady was much amaz'd,
For she knew not where to go,
And hoarse November's early blast,
Had brought with it rain and snow.
Her wings were chill'd and her feet cold,
And she wish'd for the Ant's warm cell,
And what she did in the wintry storm,
I'm shure I cannot tell.

But the careful Ant was in her nest,
With her little ones by her side,
She taught them all, like herself to toil,
Nor mind the sneer of pride;
And I thought, as I sat at the close of day,
Eating my bread and milk,
It was wiser to work and improve my time,
Than be idle and dress in silk.

L. H. S.

THE TRANSPLANTED FLOWER.

BY MRS. ABDY.

Oh! lone and languid flower, thou art taken from the glen,
In a gay parterre thou bloomest, thou art watched by careful men,
Bright sunbeams shine above thee, fair roses smile around,
Yet thou droopest in the garden—it is not thy native ground.

Thus oft are human flowers by officious hands removed,
From shades of calm seclusion, from scenes and friends beloved,
In gilded halls, and proud saloons, amid the great they roam,
Yet they languish in their triumph for their dear and early home.

From this sad and simple story a moral we may trace,
God gives to man and floweret a safe appointed place,
And the blossoms of the vale, and the lowly ones of earth,
Ever flourish best and fairest in the sphere that gave them birth.

The proceedings of the State Convention and Agricultural Society will be found highly important, and worth the earnest attention of all who are in any way interested in the cause of Agriculture in this State,—and as far as the influence of a member extends, thoughout the Union.

It may not be amiss to state the formation of a State Agricultural Society was first suggested in this Journal, and that for a series of papers published in it—the organization of the present Society was brought about.

We feel more proud of this—as the benefit to be derived from such a Society will be of incalculable importance to this State. The proceedings will speak for themselves on this point.

We wish all success to the Institution, and call upon all to lend their aid to the furtherance of its object.

STATE AGRICULTURAL CONVENTION, AT THE CAPITOL IN THE CITY OF ALBANY, FEBRUARY 10, 1837.

A State Agricultural Convention convened at the Capitol, on the 2d of February, Judge Pettit, of Onondaga, was called temporarily to the Chair, and J. B. Duane, of Schenectady, and Dr. Spoor, of Greene, appointed Secretaries, pro tem. On the Secretaries registering the names of the gentlemen in attendance, the number was found to be about one hundred and fifty, and representing forty counties.

On motion of Mr. Gray, of Chemung,

A committee of nomination was appointed, consisting of—

Mr. Labaugh of the	1st	Senatorial	dist.
" Cash of the	2d	do	do
" J. Townsend of the	3d	do	do
" E. Smith of the	4th	do	do
" Pond of the	5th	do	do
" Gray of the	6th	do	do
" Baldwin of the	7th	do	do
" Allen of the	8th	do	do

The committee, after consultation, recommended the following officers, and their nomination was unanimously confirmed by the Convention, viz:

ANTHONY VAN BERGEN, of Green, Pres't.

Vice-Presidents.
- Henry F. Jones, of Queens,
- John Townsend, of Albany,
- Andrew S. Pond, of Oneida,
- George Pettit, of Onondaga,

Secretaries.
- David Sheldon, of Dutchess,
- J. W. Richards, of Washington,
- Henry S. Randall, of Courtland,
- Hiram M'Niel, of Niagara,

On motion of Mr. Viele, of Rensselaer, Messrs. Pitts of the 1st, Davis of the 2d, Buel of the 3d, Richards of the 4th, Bigelow of the 5th, Patterson of the 6th, Robinson of the 7th, and Allen of the 8th district, were appointed a committee to report resolutions for the consideration of the Convention.

On motion of Mr. Buel, of Albany,

A committee was appointed, consisting of Judge Spencer and J. B. Nott, of Albany, and A. Walsh, of Rensselaer, to examine and report on the Silk Spinner and Twister of Mr. Brooks, exhibited in the Capitol.

On motion of Mr. Allen, of Erie, it was

Resolved, That Messrs. Mather and Hall, two of the State Geologists now in the city, be requested to report to this Convention, the probable benefits to the Agriculture of this State which may result from the geological surveys now in progress.

The Convention then adjourned till 4 o'clock on Friday afternoon.

FRIDAY, February 3.

Mr. Buel, from the committee appointed to report resolutions for the consideration of the Convention, reported in part, the following:

Resolved, That in the opinion of this Convention, agriculture is the great business of the State; that upon its resources and improvements, the merchant, mechanic, manufacturer, and all other members of society, must depend mainly, for subsistence and for wealth; and that upon the intelligence and virtue of those who manage its labors—comprising, as they do, the mass of our population—must materially depend our moral and intellectual character as a people;—

That hence it is of primary importance to all, that this great branch of labor should be specially encouraged and honored, and that the agriculturist should himself receive all those mental aids, and that stimulus to industry, which are calculated to make him more prosperous in his business, and more useful to society.

That we are now particularly admonished, by the scarcity and very high price of all the products of agriculture, to put forth

our efforts to enlighten its labors and increase its productions;—

That to the Legislature of the State, as the constituted guardians of the public weal, particularly appertains the duty of fostering and improving this primary source of our wealth and happiness;—

That from the experience of the past, at home and abroad, this convention are confident, that the patronage of the government may be advantageously extended, and without detriment to the financial operations of its treasury, to this great object;—

1. By so raising the standard of instruction to the children of agriculture, as to enable them to understand, and to apply to productive labor, the best practices and improvements of the age; and,

2. By imitating the successful examples furnished by other governments, of calling forth the skill, industry and competition of our citizens, by pecuniary rewards and honorary distinctions;—

That influenced by these views, the Convention respectfully recommend to the Legislature, to appropriate a permanent fund, the interest of which shall amount to at least *thirty thousand dollars* a year, to encourage the establishment, and to sustain in usefulness, a central, and county agricultural societies, and to promote, generally, the interests of husbandry, under such regulations and restrictions as to them shall seem meet; and that provision be made by law, for introducing into our common schools, such books of elementary science, as may be best calculated to accelerate our improvements in the arts of productive labor.

Resolved, That there are many new implements of husbandry, calculated greatly to abridge agricultural labor, and to increase its products and its profits; that there are many also offered for sale, that are unworthy of public patronage; that from the difficulty, in the farmer, of determining, on superficial inspection, the relative merits of such implements, many impositions are sustained, and an injurious want of confidence necessarily exists in those which are eminently useful; that to remedy these evils, and to facilitate the more general introduction of labor-saving implements, it be recommended to the State Agricultural Society, to appoint a board of inspectors to examine, thoroughly to test, and to determine and certify, the relative merits of all new farm implements and machinery which may be presented to them for inspection; that said board comprise men of mechanical science, practical machinists, and experienced farmers; that they hold semi-annual meetings for this purpose, and that it be respectfully recommended to the legislature, to provide a reasonable compensation to the members of said board, while necessarily engaged in the duties of their appointment.

Resolved, That this convention recommend the substitution of a money, instead of a labor assessment, for the making and keeping in repair our common roads.

Mr. Viele, of Rensselaer, moved the adoption of the preceding resolutions, and went into a very able argument (see address at the conclusion of these proceedings) to show that the objects they proposed were eminently calculated to promote the great ends of free government, and to accelerate our progress in improvement and in wealth.

The resolutions were unanimously adopted, and a copy thereof ordered to be presented to each house of the legislature.

On motion of Mr. Beekmar, of Columbia,

Resolved, That Judge Spencer and J. Buel, of Albany, and H. L. Baldwin, of Onondaga, be a committee to collect statistics upon the state of our agriculture, with a view of enlightening the public mind as to the causes which have led to the necessity of importing foreign wheat, rye, barley, oats and hay, for the supply of an agricultural nation.

Resolved, That J. Buel, Prof. Mather, and L. C. Ball, be constituted a committee to collect facts in regard to the history and habits of the grain worm, (*tipuli tritici*) to its ravages upon our farm crops, and to the means, if any are known, of preventing its depredations; and that they be requested to report to the next Agricultural Convention.

Resolved, That J. P. Beekman, of Columbia, A. Van Bergen, of Greene, J. J. Viele and A. Walsh, of Rensselaer, be a committee to inquire whether, in the distribution of public moneys in aid of agriculture, a better mode can be devised, than that of giving it to county agricultural societies, to be awarded in premiums.

On motion of Mr. Ogden, of Yates,

Resolved, That in the opinion of this convention, the tariff compromise of 1833, so far as regards the protection it affords to the products of our soil, ought to remain inviolate.

Resolved, That the Secretary forward to each of our representatives in Congress from this State, a copy of the preceding resolution.

On motion of Mr. McCulloch, of Rensselaer,

Resolved, That in the opinion of this convention, the interests of agriculture would be promoted, and the business intercourse of the country much facilitated, by the establishment of periodical *fairs*—not of exhibition merely, but for the exchange of the ordinary productions of the country; and that the design of a plan, for the introduction into this State of a system, the vast utility of which has been tested in other countries, by the experience of ages, is deserving the consideration of the Legislature, and of the agricultural interests.

Mr. A. Walsh, from the committee appointed to examine Brooks' Silk Spinner and Twister, reported.

That in the absence of Mr. Nott, Messrs. Spencer and Walsh have seen the machine in operation, and critically examined it; and that they are of opinion that it is not only a most ingenious invention, but in their judgment cannot fail of becoming eminently useful. It seems to solve the problem, which has induced great doubt, whether the culture of Silk in the United States would be profitably prosecuted, from the difficulty of good reeling of silk from cocoons, without very considerable manual instruction. The committee is satisfied, that an ingenious female can almost immediately learn to reel on Mr. Brooks' machine, in a perfect manner.

As the machine has been seen by the convention, the committee forbear to describe it particularly; but they recommend to the convention a donation to Mr. Brooks, as a small reward for the immense benefits this invention will confer on the silk culturists of this country. (The subjoined is a cut of Brooks' Silk Spinner and Twister—with it a woman will convert half a bushel of cocoons into sewing silk in a day, or into twist, or into single, double or threble threads, of any required fineness—the invention of the Spinner promises to be worth millions.)

On motion of Mr. Allen, of Erie,

Resolved, That we approve of "*The Farmers' School Book*," by J. Orville Taylor, and that we earnestly recommend its introduction, as a reading class-book, in all our common schools.

BROOK'S SILK SPINNER AND TWISTER.

The following petition, signed by a number of highly respectable citizens, was then read:

To the Legislature of the State of New-York:

The petition of the undersigned represents,

That a law was passed at the last session of the Legislature, "to incorporate the New-York State Agricultural School, for instruction in literature and science, and improvement in scientific and practical agriculture, and in the mechanic arts:"—

That from the known utility of like schools in Europe, your petitioners believe the school contemplated by that act will tend to enlighten labor in our useful arts, to increase greatly its products, and to subserve the best interests of the State;

That they consider the plan of combining labor and study, in juvenile education, with practical instructions in the arts, particularly in agriculture, as among the great improvements of the age, calculated to increase our resources and enjoyments, and to extend and perpetuate the rule of rational freedom;—and as particularly adapted to our wants as a free people;—

That from these considerations, a portion of your petitioners have been induced to become subscribers to its stock, and not from the hope of gain, as is evidenced from their not asking, and not being permitted to take more than five per cent. upon their investment.

That they are desirous of giving to the school all the advantages which its great importance demands, and of placing its benefits within the reach of the most humble in life, and obtaining for it the countenance and support,—matters of moment to a young institution,—of the Legislature of the State;—and

That the better to enable them to carry out, as they trust, these beneficent designs, they respectfully ask of your honorable body, such an appropriation from the public treasury, to aid in the purchase of a library, apparatus, &c., as a liberal regard for the interests of the State will permit, and its resources warrant;—or

That the Comptroller be authorized to subscribe, on behalf of the State, to the stock of said school.

Albany, Feb. 1st, 1737.

Whereupon it was unanimously

Resolved, That this convention concur in the sentiments set forth in said petition, and that it cordially unite in the prayer of the petitioners.

Mr. Mather, of the State Geological corps, read the following report:

The Agricultural Convention having requested a statement of some of the advantages which may probably result to the agricultural, and other interests, from the geological survey of the State now in progress, I will proceed to sketch a slight outline.

When we look around upon the surface of our country, we are apt to conclude that the materials forming it, are arranged without any regularity or order; but it is not so. The laborious investigations of the geologist and mineralogist have demonstrated, that there *is a regular order in which these aggregate masses of strata called formations*, are superimposed upon each other, and this order is never inverted.

Another fact of equal importance is, that certain mineral substances are most constantly associated with each other, and also, that they are found in particular kinds of rocks.

The geologist, guided by these facts, in traversing any district of country, knows what mineral substances and rocks will probably be found. He is thus guided in his search for coal, valuable ores, salt, gypsum, limestone, for marbles, for lime and hydraulic cement, and all the various minerals and rocks which can be applied to useful purposes.

Geology thus serves to point out the geographical positions in which particular minerals may be expected, and geological investigations serve to trace out the particular localities, so that the public may reap the benefit.

The geological survey now in progress, has made such developments of our rich and varied mineral resources, as will serve to introduce various new branches of industry, afford new fields for profitable employment and investment of capital, and add a new impulse to the rapidly growing prosperity of the State.

Another important object of the survey will be to undeceive the public mind in relation to the numerous fruitless researches for coal, silver, gold, tin, lead, &c., which are so often sought in the bowels of the earth, where there is not even a *probability* that they will be found. Hundreds of our fellow-citizens have been duped by the interested motives of a class of ignorant men, who pretend by mineral rods and other means, to have the power of discovering valuable metals. In these persons, some of our citizens have placed such implicit confidence, that their whole estates have been expended ere they have repented of their credulity. The mining mania along the Hudson is for finding coal, and it has very frequently been announced, that valuable beds had been discovered. In some instances companies have been formed, and explorations made, but every instance which has come under my observation was fruitless, and any well informed or practical geologist would have said at once, on seeing the place, that there was no indications sufficient to justify the expenditure of even a single dollar.

It is believed, that in the valley of the Hudson alone, enough had been expended in fruitless mining enterprises to defray the whole expense of the geological survey.

The landholder and farmer are perhaps more interested in the investigations of geology than any other classes of the community, and it is a matter of great importance to them to estimate correctly, not only the *agricultural value*, but the *mineral wealth* of their lands.

The farmer, perhaps, may suppose, that geological investigation and science have little to do with agriculture: if so, he is in error. The examination of soils, (which, except the wash from hills, rivers, &c., result from the decomposition of the *subjacent materials*.) is one of the most important of all the economical applications of geology. The applications of geological science have not unfrequently converted barren wastes and stagnant marshes into fruitful fields. Examples have been so numerous that it is deemed unnecessary to mention any in this brief sketch.

In regard to the economical application of geology to the agricultural interests of the first Geological District, I must beg leave to refer to the "Geological Report," which will be published under the authority of the Legislature, as it would be improper for me to mention them before its appearance. In that report, this and other subjects connected with agriculture are discussed more extensively than is practicable, while preparing this hasty article: numerous suggestions have been made in regard to improved methods of cultivation, and new manures, and varied application of those now in use have been recommended.

Although our soils now yield millions to our farmers, yet, they are capable of much higher cultivation; and our deposites, of ores, salt, gypsum, limestones, marbles, granites, peat, marl, &c., productive as they already are, have scarcely begun to yield their rich and productive harvests. Comparatively few of their localities have yet been brought to the view of the public eye.

Acknowledge of some of the applications of geology are of the highest importance to the engineer in the construction and location of public works, such as roads, bridges, aqueducts, canals, railroads, public edifices, fortifications, breakwaters, &c.

The applications of geology are of so great economical importance to every class of our citizens, that it is not only hoped that such a knowledge of this subject as will be practically useful, may be generally diffused through the community, by means of our schools, academies, and colleges; but that a department will be created in the proposed agricultural college or school, in which the applications of chemistry, mineralogy, geology, &c., to agriculture, mining, metallurgy, and the arts, shall be thoroughly and systematically taught.

I have mentioned metallurgy, mining, and the arts in connection with the applications of the science, because, it is mainly owing to improvements made in them, that agriculture, civilization, and the arts have progressed to their present improved states.

New-York has made a more liberal appropriation for the objects of the geological survey than any other State, and if the results be worth any thing to the community, they will be of infinitely more value than the amount expended, and it is probable that the revenues arising from the additional transportation on our railroads and canals, will, in a single year, more than compensate for the whole appropriation.

In preparing this article, I have had time only to glance, without much order, at a few of the many important advantages which will result from the geological survey; but it is confidently believed, that if it be carried on with that minuteness of detail, which is necessary to the development of our rich and varied resources, as great an impulse will be given to the general interests of the State, as has been by the Erie canal; and New-York, in this project, as well as in that, will have the credit of having been guided by the most liberal and enlarged views of State policy,

and of having set an example worthy of imitation by others.

On motion of Mr Baldwin, of Onondaga,

Resolved, That the thanks of this convention be tendered to Messrs. Mather and Hall, for their report, and that a copy be requested for publication.

On motion of Mr. Allen, of Erie,

Resolved, That Green's Straw Cutter, manufactured by J. D. Shuler, and exhibited in operation to the members of this convention, be recommended to the farmers of the country, as an article perfect of its kind, and of great economy in feeding farm stock.

A beautiful female Angora goat, imported from France, was exhibited to the members of the convention: (the male was lost on the passage.) The animal will do well in this climate. The one shown was in high health and condition, and its fine coat was long and thick enough to protect it against the severity of our winters. It has a warmer covering than a sheep; for next to the skin i has the fine wool of the Saxons and growing through it, a long hair, soft as silk, and twice as long as the wool of the Bakewells. If the animal thrives in this country, of which there is every probable appearance, it will be an acquisition that will add immensely to our wealth.

ANGORA GOAT.

The convention then adjourned to 7 o'clck in the evening.

7 o'clock P. M. Feb. 4.

On motion of Mr. Allen, of Erie,

Resolved, That the State of New-York, powerful in resources and in enterprise, as she is great in territory and population, is eminently qualified to excel in her agriculture, and in the wealth and intelligence of her husbandmen; and that it is therefore incumbent on her legislature, with the ample means now at their command, to call forth this new source of greatness, by a liberal provision for her agricultural institutions.

Upon this resolution, which was cordially and unanimously adopted, very able speeches were made by Mr. Allen, Mr. Ball of Rensselaer, Mr. Cheever of Albany, Mr. Baldwin of Onondaga, Mr. Shuler of Niagara, Mr. Beekman of Columbia, Mr. Richards of Washington, Mr. Randall of Cortland, &c.

On motion of Beekman, of Columbia,

Resolved, That the exhibitions made to this convention, of silk and fabrics and thread, made from the indigenous mulberry of our own country, affords ample evidence that the silk culture is admirably adapted to our soil and climate, and that nature has bountifully supplied us, should foreign resources fail, with an excellent material for its prosecution.

On motion of Mr. Randall, of Cortland.

Resolved, That the several gentlemen who have addressed this convention, be requested to furnish a copy of their remarks to the convention for publication.

Resolved, That the publishers of newspapers in this State, friendly to agricultural improvement, be respectfully solicited to give publicity to the proceedings of this convention.

On motinn of Mr. Viele, of Rensselaer.

Resolved, That it be recommended, that an agricultural convention be convened at the City Hotel in Albany, on the first Thursday of February next, at 10 o'clock, A. M., that the several counties in the State take proper measures to be represented therein, and that the secretaries of this convention cause timely notice thereof to be given in the public papers.

After the report of the resolutions for the consideration of the convention had been read, Mr. J. J. Viele addressed the meeting as follows:

Mr. PRESIDENT:—In looking about me, I see assembled a numerous collection of gentlemen, from all parts of this great and wide extended State, comprising much talent, much moral worth, and, if I may judge from the distance they have travelled at this inclement season, I should say they possessed an eminent degree of disinterested patriotism and philanthrophy. What, I ask, has called together this numerous convention of agriculturists? Is it to promote the objects and interests of party? Most assuredly not. Agriculture is of no party. It comprises the whole of all parties. Five-sixths of our whole population are engaged in its active pursuits; and the other one-sixth is as dependent upon it, as the branch is upon the roots for nutriment and support. Have they any sinister or personally ambitious views in coming up hither? I trust and verily believe not. The character of this convention, and the reputation of those who compose it, utterly refutes any such imputation—entirely disperses all suspicion.—And beside, the cause itself, and proposed objects, is not susceptible of any such perversions. What then, Mr. President, has assembled this truly respectable convention? The question may be answered almost in a word. *It is to do the greatest good to the* GREATEST *number*. It is to devise the best plan to improve the agriculture of the State, and in so doing, ameliorate the condition and promote the happiness and prosperity of the whole human family. *Truly*, then, it is a laudable and philanthropic errand upon which we have come. Truly, it is a cause worthy the attention and consideration of all from the humbliest laborer that treads the "vine clad hill," to him who sways the sceptre of government, and directs the energies of a great and free people. It is a fact that will be conceded by all, that agriculture and the labors of those engaged in it, is the main source and foundation of individual and national wealth. That it is the basis and substratum of all other interests and avocations. On it, all depend—to it, all look for nutriment and support. That in proportion as this interest flourishes, does every other prosper, and when it languishes all others decline. Embracing, as it does, so great a proportion of the community, it gives an impress to the character of our country and all her institutions. The farmers of the State, decide by their numbers, our elections—they control indirectly the government. How important then, that they should be educated, and fitted for the discharge of those duties with regard to their country, in which they are most deeply interested, that they are now obliged for the want of capacity in themselves, to confide to others.—How important that they should be qualified to direct and manage their own political concerns, rather than be nosed and led about as mere automatons at the back of some professional demagogue. How important for the stability and well-being of our republican institutions, that the standard of education and knowledge should be elevated among so numerous and useful a body of citizens as the farmers of our land. They require knowledge in order to enable them to discharge their duties to themselves and families, in the successful cultivation of the earth. Knowledge is essential to enable them to make judicious selections of rulers and to qualify themselves for the discharge of the multifarious civil duties that necessarily devolve upon them.

With this view of the subject, the question naturally arises—how shall the evils of which we complain, be remedied? How shall so desirable an end be attained? I answer, firstly, by the establishment of schools, liberally endowed by the State; where the sons of Farmers can be educated in a manner suitable to their occupation.—It was wisely said by an ancient Grecian philosoper, that boys should be first taught that which they intend to practice when they become men. So the sons of farmers should be sent to a school where agriculture is taught as a science,—and where the advancement and perfection of that science is the primary object, and where a practical application of all the sciences shall be made to the useful purposes of life,—where the

mind shall direct the hand, and where the beauties, the properties and the treasures o the earth shall be developed to the youthfu mind; in such a manner, that it shall no forever thereafter be lost, but shall be carrie with him into the world, into the field an the workshop; shedding its light and diffu sing its blessing upon all within the reach of its influence.

But shall I be told, and do I have it urge as an objection to the establishment and en dowment of such institutions, that we have already academies and colleges endowed upon a liberal scale, where all that desire it may receive an education. I grant it—and to the honor of our State be it said.—But this fact, instead of being a reason against, is a strong and forcible argument in favor of, the proposed plan.

For I maintain that these institutions, al though useful in their sphere, do little or nothing to promote the great and noble object which we have in view. The favors and bounties of Government should be dispensed with an equal and impartial hand. And if I show that the literary institutions of the State, that have been endowed by appropriations from the public treasury, to which the farmers are the main contributors, are, from their nature and organization, calculated to benefit and build up a particular class in community; and that class not, perhaps, the most useful and productive, to the exclusion of the great body of the people; then, I think it will be conceded, that it is high time that the attention of our Legislators and those entrusted with the administration of government, should be directed to the subject, to the end that the evil may be remedied, and equal and impartial justice be done. And in pursuance of this subject, I must remark, without wishing to disparage the literary institutions of the State, that their tendency is not to diffuse general science among the laboring and productive classes, but to built up a literary aristocracy in the country. They are peculiarly calculated to prepare young men for the learned professions. They make good lawyers and good physicians, and they elevate the clerical character of the country; but it is very clear to my mind that they contribute very little towards improving the agriculture of our country; but on the contrary, their influence is to abstract all the young men of talent from the pursuits of agriculture and the mechanic arts; and merge it into the professions. They are filled mostly by the sons of the wealthy and most aristocratic part of community, among whom the honest yeoman and his profession is in bad repute, and the son of the farmer who, perchance, finds his way into them; soon ascertains that the occupation which has given him sustenance, is derided, and viewed as menial and slavish, he consequently imbibes a disrelish, and, perhaps, a disgust for it; and he flies away to the office of some lawyer, or the shop of some apothecary, and there learn to get a livelihood out of the honest earnings of a less respected class in community. And if, perchance, he does not take to one of the professions; as a general rule, his habits of industry are destroyed, his taste is vitiated, and he spends the remainder of his life a useless drone, a burthen, and I had almost said, a nuisance in society. The consequence and effect of this state of things, is, to protect and encourage the profession, to elevate them in the public eye; and on the other hand, to depress and discourage the business of agriculture and the mechanic arts generally.

With such effects, and under such discouragements, is it longer matter of surprise, that the first and best pursuit of man should be brought into disrepute and languish for want of the necessary stimulus and support. Is it longer to be wondered at, that the sons of farmers and mechanics should forsake the healthy, invigorating labors of the field and the workshop for the law office, the banking house, and the counting room? It is a matter of notoriety, and a lamentable fact, that almost every other occupation is considered more honorable, or more genteel than that of the farmer. The consequence is, a general abandonment of its pursuits, by all the ambitious youth of the country. This is an evil of great magnitude, and the cause is to be found in the want, or the absence of that knowledge in the agricultural community, that alone elevates character, exalts the human species, and renders man truly respectable. An elegant writer has said, and it has ripened into axiom, that "knowledge is power,—knowledge is wealth,—it is the philosopher's stone—the true alchemy that turns all it touches into gold. It is the key that unlocks the store-house of nature and discovers the hidden treasures of earth." Without it man would not be distinguishable from the brute; and in proportion as he is possessed of it, in the same ratio is he elevated above that lower order of creation.

That science has already done much to improve and promote the condition of our agriculture, cannot be controverted. To her she is indebted for almost all the improvements that have been made in tillage and the rural arts. To her she owes the introduction of the improved cast iron plough—the roller—the cultivator—the threshing machine—the hay press, and the whole host of labor-saving machines, that have lessened the toil of the husbandman and increased the productions of the earth. Another triumph of science, we have also this day witnessed, in the recent invention of the silk reel and spinner; which promises to be of immense value and utility, in this new and interesting branch of rural industry.

The benefits that will accrue from the establishment of public schools, where agriculture shall be taught as a science and an art, are incalculable. There can be applied the well settled principles of science, in the invention and introduction of improved farm implements. There, the nature and qualities of soils can be learned, with the best methods of renovating and improving them. There, the physiology of plants, and the nature and habits of the whole vegetable kingdom, can be made thoroughly understood. There, with philosophy, chemistry, botany, mineralogy and geology, unite in their contributions, to the advancement of man's highest interest. There, the principles of mechanics can be taught, and the inventive genius of our country illicited. There, can be learned the science of entomology, or the nature and habits of the various tribes of insects, that prey upon and often destroy the farmer's hopes; with the best remedy or preventives for such depredations. In schools of this kind might also be taught the science of veterinary surgery, or the nature of the diseases of domestic animals, and the remedies. By a general diffusion of knowledge on this subject, thousands, yea, tens and hundreds of thousands, might annually be saved to the community that is now lost through a miserable, beggarly system of quackery.

Much more might be said of the advantages to be derived from institutions of this kind, were it deemed necessary. That they are sources of much public good, fountains from which flow health, wealth, and all those attendant blessings which enrich a country and ennoble the human species, cannot be doubted by any that have examined and reflected upon their utility; or have witnessed or become conversant with their operation and effects in Europe. There they are no longer considered experiments. France has long had her schools for the promotion of agriculture and the mechanic arts. In Prussia, where perhaps as much or more is doing to promote the cause of science, at present, as in any other country, agricultural schools are founded and supported by the government. Germany, too, has her schools devoted to the improvement of the soil and the mind. And the advanced state of her agriculture and of science, within her borders, attests the wisdom of the policy, and is but an earnest of what might be done in this free country.

The school established by Fellenberg, in Switzerland, the result of the efforts of a single philanthropic and public spirited individual, challenges the admiration and the emulation of the world. His great aim was to "produce *men*, not mere *scholars*. The leading principles of his system is, to unite physical, moral, and intellectual education, and to form all the faculties into one harmonious system, corresponding with the capacities and destination of the individual."—Young men are sent to this school from all parts of Europe and even America. Its influence is more or less felt throughout the civilized globe. Cannot the great State of New-York, empire as she is in wealth, population and extent, do as much to promote the diffusion of science, among the productive classes; as has one individual of Switzerland? Will she not awake to her interest and her honor, and do as much as has been done by the despotic governments of Europe? The character of our agricultural community will never be elevated much above what it now is, unless schools are established particularly adapted to that object. And how shall schools be established, except through the munificence of the State? It has ever been the policy of all wise governments to promote the sciences and encourage the arts. And shall agriculture, the greatest and most complicated of all the sciences, and the most useful of all the arts, be left to languish and decline, or even to remain stationary for want of the fostering care of government?

Another method by which our interests can be promoted, is through the agency of societies. That united and concentrated effort can do more towards accomplishing any general object, than the exertions of insulated individuals, does not admit of a doubt. We have evidence of it in the as-

sociations that are almost daily formed, to promote the great objects of humanity and benevolence. The awarding of premiums for any improvements that may be made in labor saving implements, or machinery, and also for the production of the greatest results in tillage with the least expense, would give an impulse, and excite a general spirit of rivalry and competition, that could be productive of the most beneficial consequences. Does any one doubt the utility of these associations? Let him turn his attention to those countries in Europe where they have been established, and see the cold and barren earth made warm and fruitful, her productions quadrupled, and the moral and intellectual condition of the people correspondingly improved. Look at those districts in our own happy land, where attention has been paid to this subject, and societies of this kind kept organized, and compare them with those where it has been entirely neglected. The contrast is too striking, and the difference in the general appearance of the country—the wealth of its inhabitants, and the social condition of the people, is too great to require one more word by way of illustration.

But here again a difficulty presents itself. Societies of this kind cannot be maintained without funds, and funds cannot be obtained without the aid of the State. The question then arises, will the State contribute to an object so nearly allied with its glory and prosperity? The present is a time auspicious for making such provision, for the advancement of this cardinal interest, as shall augment the wealth, promote the happiness, and redound to the honor and glory of this great State.

The State is about to receive from the U. S. Treasury, nearly six millions, as her quota of the surplus revenue. Why not appropriate a part of the avails of this sum for the endowment of a State Agricultural School, and for the encouragement of societies? The amount so appropriated, would soon be returned with compound interest into the treasury, by the increased revenue that would be derived from canal tolls and taxes, in consequence of the stimulous that would be given to agricultural industry. Soon would the productions of the State be quadrupled; and instead of the greatest agricultural country in the world, being importers of bread stuffs for our own consumption, we should be exporters, and to a large amount. It is a fact, that speaks volumes in favor of an increased attention to this subject, and of the necessity of improvement, that we, who but a few years since threatened to reduce Great Britain to a state of starvation, are now importing, not only immense quantities of her bread stuffs, but even hay, to supply a population scattered over an immense territory of the most fertile lands beneath the sun.

It is perfectly proper, that in accordance with the publicly expressed voice on this subject, that a part of this money should be appropriated to the improvement and promotion of common schools—those nurseries of virtue and intelligence. In no way, perhaps, could so general a benefit be derived from it, but, Mr. President I do most solemnly protest against our incorporate Academies and Colleges receiving these funds, to the entire exclusion of schools of Agriculture. This consideration appeals to our sense of justice and equity, with great force. It arouses our feelings of philanthrophy and patriotism, and calls up the republican principle that government has instituted for the good of the many and not the few. Why, I ask, should institutions already endowed, and whose benefits are enjoyed mainly by the aristocratic few, receive this boon, to the exclusion of that great body of the people, whose interest is identified with the successful cultivation of the soil?

Demonstrations too of public opinion have long and often been made on this subject. And we all profess to be governed more or less by public opinion, especially when acting in a public capacity. Convention after convention has been held in this hall—resolution after resolution has been passed by the people in the several counties of the State—petition after petition, with it is to as to the number of signatures, have been presented to successive Legislatures; and all asking for an appropriation for this great cause.—Report after report has been made in favor of this subject; by committees of each house, and still for want of time, or understanding, or some other cause, it has not been brought to a successful result. And while on this subject, I cannot but notice with respectful aknowledgments the situation of that public sentiment, in the enlightened view that was taken of this subject, in two successive messages by the present Executive of the State. In touching upon this topic, his language is so happy, and his deductions so clear, that I will take the liberty of presenting to the convention the following extracts:—In 1833, he says—"From the consideration of these important subjects, I pass to one of *greater* and more general interest, lying more directly within the reach of our legislative action, and demanding from us a particular attention. Agriculture was undoubtedly the primitive pursuit of man in a civilized state of society, and seems to be indicated to them by Heaven, as their best employment. Vigor of body and purity of mind are eminently enjoyed by the husbandman.—Without meaning to disparage any class of men, or to deny a due proportion of public virtue to all, history and experience warrants the assertion, that the cultivators of the soil have ever been among the first to cherish, and the last to abandon free institutions. It is not, however, for this reason that agriculture presents peculiar claims for your guardianship. It not only furnishes occupation to a much greater portion of our citizens than any other department of labor, but it supplies the materials for all others. It must be regarded as a matter of some surprise, that an employment in which so great a number of the human family are directly engaged, in which all look for their daily bread, and upon which commerce, manufactures and the mechanic arts—in fact, all the various pursuits of mankind—so necessarily depend, should not have risen to a still higher consideration than it has yet attained, and received from those entrusted with the power of legislation, more liberal aids.

The numerous agricultural societies organized in the several counties in this State, in consequence of our legislation, flourished for a season, then languished, and are now generally dissolved. The interest of agriculture was, to a considerable extent, promoted by these societies.—The contributions from the public treasury, distributed principally in premiums, gave a sudden impulse to agricultural industry, and induced many laudable efforts among farmers, not only to excel in their productions, but to introduce valuable improvements in husbandry; yet it has been questioned whether the benefits derived were of such an extensive and abiding character, as might have been realized by a different application of the fund derived from the government. Agriculture is a science as well as an art: and both must be systematically cultivated and widely disseminated, before it would attain a high degree of improvement. The general intelligence and individual enterprise of those devoted to the pursuit, have carried the art as far, perhaps, as could reasonably be expected without a better knowledge of the sciences connected with it. With a salubrious climate, and fertile soil; with extensive regions but partially brought under the power of cultivation; with rising manufactures and a flourishing commerce, demanding the surplus produce of husbandry; with a population full of enterprise, and distinguished for native skill and practical talents we may reasonably expect great advantages from the cultivation and diffusion of the sciences connected with the art. The *subject appears to me in every respect worthy of your attention; and to merit a liberal encouragement.*"

In the Annual Message of 1834, we find the following language:—"The subjects connected with the business pursuits of our constituents, next claim our notice.—Among these, Agriculture stands first in the order of nature, as well as in the rank of importance. It contributes so essentially to wealth, that the early writers on political economy regarded it as the only source of wealth. It furnishes the means of human subsistence, and supplies most of the materials for manufactures, and the chief articles of commerce. When the labor of the farmer is bountifully rewarded, all other kinds of industry partakes of its success; whatever therefore, is done by the government for the agricultural interest, redounds to the benefit of every other—There is no other occupation which is so diversified in its objects, and requires such various knowledge to conduct it skilfully, as that of agriculture. This knowledge results from experiments in all climates, soils and seasons, and is consequently to be derived from different countries. It receives large contributions from the mechanic arts, and from the science of Botany, Chemistry and Natural Philosophy. The patronage of the government can scarcely be directed to a more useful object, than

furnishing the means of collecting information on this subject, and of spreading it among the agricultural population. A board composed of practical farmers and men of scientific attainments, would possess great facilities for concentrating this scattered information; and the best means of disseminating it among the people, would be afforded by a public institution, under the direction of such a board, when agriculture should be taught as a science, and practically illustrated as an art. The general interest felt for this branch of industry, will recommend it to your favor; and its intimate connection with the permanent prosperity of the State, will make you desirous of contributing to its advancement."

Thus you see, Mr. President, that in accordance with an enlightened public sentiment, has the attention of our Legislature been recently called to this subject. Subsequent Messages have, in substance, reiterated the above sentiments. It is to be hoped, then, that the Legislature will sustain the Governor, and respond to the manifestations of public sentiment, by adopting a wise and liberal policy with regard to this important interest of the community.

One more view of this subject, Mr. President, and I close. We come not before the constituted authorities of the State as pitiful beggars at the foot of a throne, nor are we yet reduced to quite that state of vassallage and degradation, as are the boors and feudal serfs of the more despotic governments of Europe; but we appear as the Lords and Sovereigns of the land, asking, in most respectful terms, "nothing but what is strictly right, unwilling to submit to any thing that is wrong." We are the source of all political power; Executive, Legislative, and Judicial. We constitute the great body of the people—the sovereignty of the land. We bear the burthens of government in peace, we are its bold and defence in war. It is to be hoped, then, that an interest thus important, will receive that attention and fostering care, from the constituted guardians of our rights, that the prosperity of the whole community so imperatively demands. Let the empire State; justly proud of her march in internal improvements, and her splendid monuments of art; also lead the way, and set an example worthy of her sister States, in the encouragement and advancement of agriculture—the only true source of wealth—and soon will the entire face of the country be changed. Our fertile valleys will double their increase, our barren plains become productive, our swamps and marshes be reclaimed, the "desert and solitary place be made glad, and the wilderness blossom as the rose."

The convention then adjourned *sine die*.

J. W. Richards, Publishing Sec'y.

ANNUAL MEETING OF THE NEW-YORK STATE AGRICULTURAL SOCIETY.

At a meeting of the New-York State Agricultural Society, held at the Capitol in the city of Albany, February 3, 1837, Archibald McIntyre, President took the chair.

On motion of Mr. J. P. Beekman the following preamble and resolution were adopted:

Whereas, since the last meeting of the New-York State Agricultural Society it has been deprived, by the death of the Hon. J. B. Yates, of Madison county, of one of its most efficient and talented members—one of its earliest friends and most liberal patrons—whose zeal in behalf of this society was more or less manifested upon every proper occasion, and of whose intelligence we could and did so largely avail ourselves at the last annual meeting: therefore,

Resolved, That, entertaining a high sense of the character of the Hon. J. B. Yates, our late member, we order the above preamble and accompanying resolution to be recorded as among the proceedings of this society, and that a copy be forwarded by the secretary, to the widow of the deceased, as an evidence not only of the estimation in which we held our late member, but of our sympathy for the loss of her excellent husband.

On motion.

Resolved, That Joel B. Nott, Jesse Buel, Henry Burden, John P. Beekman, and Anthony Van Bergen, be constituted a Board of Inspectors, to examine thoroughly to test, and determine and certify, the merits of all new farm implements and machinery which may be presented for their examination; and that the members of the said board be requested to meet semi-annually, at such time and place as the chairman shall appoint, to examine and test the implements which may be offered for their inspection.

On motion

Resolved, That the treasurer forward to this society, a statement of the amount due from them respectfully, and request payment

On motion of Mr. Walsh.

Resolved, That a committee of three be appointed to inquire into the necessity and importance of an increased attention to horticulture and household arts, as intimately connected with the improvement and promotion of agriculture, and that they report at the next annual meeting of the society.

Whereupon, the following persons were appointed to be said committee:—Messrs. Alexander Walsh, John J. Viele, and John Keyes Paige.

On motion of Mr Beekman.

Resolved, That Jesse Buel, L. Chandler Ball, and W. Augustus S. North, be a committee to collect statistical facts in relation to the culture of the beet and the manufacture of sugar therefrom, and that they report at the next annual meeting of the society.

On motion of Mr. Buel.

Resolved, That Messrs. Ambrose Spencer, John B. Duane, and John Keyes Paige, be a committee to collect statistical facts in relation to the silk business, and that said committee be requested to report to the society at their next annual meeting; and further, that the said committee make inquiry as to the adaptation of the indigenous mulberry for the production of silk.

On motion of Mr. Duane.

Resolved, That a committee be nominated to wait on the joint committee of the two houses of the Legislature, in relation to so much of the Governor's Message as relates to the distribution of the surplus revenue, to request them to delay their report to the Legislature until the joint views of the State Agricultural Society and State Convention can be presented to them.

Whereupon, Messrs. John B. Duane, J. P. Beekman, Anthony Van Bergen, and the President and Secretary, were appointed said committee.

On motion,

Resolved, That a committee of five be appointed to nominate suitable persons as officers of the society for the ensuing year.

Whereupon, the following persons were appointed:—Messrs. Allen, Buel, Van Bergen, Baldwin and Randall.

The nominating committee having reported, the society proceeded to the election of officers for the ensuing year, and the following persons were duly elected.

John P. Beekman, President,
Anthony Van Bergen, First Vice-Pres't.
W. Aug. S. North, Second do.
Archibald McIntyre, Third do.
Harvey Baldwin, Fourth do.
Jesse Buel, Corresponding Secretary,
John Keyes Paige, Recording Secretary,
Caleb N. Bement, Treasurer,
John Townsend, }
Alexander Walsh, }
James McNaughton, } Executive Com.
Jesse Buel, }
Henry D. Grove, }

On motion of Mr. North,

Resolved, That committees be appointed, whose business it shall be to report at the next annual meeting, the progress of improvement in *Neat Stock*, *Horses*, *Sheep* and *Swine*, together with any information they may be able to obtain, interesting to the Agricultural interest generally, relating to those subjects.

Whereupon, the following persons were appointed to be said committees:—

On Neat Stock—Messrs. Francis Rotch, John P. Beekman, and W. Aug. S. North.

On Horses—Messrs. Lewis F. Allen, John C. Stevens, and Cadwallada D. Colden.

On Sheep—Messrs. Henry S. Randall, John B. Duane, Henry D. Grove, Caleb N. Bement and Francis Rotch.

On Swine—Messrs. Jesse Buel, John J. Viele and Caleb N. Bement.

On motion of Mr. Shuler.

Resolved, That a committee of three be appointed to report the condition of the several county agricultural societies, to the corresponding secretary, as opportunity may occur.

Whereupon, J. D. Shuler, Henry S. Randall and L. Chandler Ball, were appointed said committee.

On motion of Mr. Allen.

Resolved, That the proceedings of this society be published in the three agricultural papers published in this State, and in such other papers as are favorable to the agricultural interests.

On motion.

Resolved, That the executive committee report at the next annual meeting of this society.

The annual address to the society was then delivered, by Prof. James McNaughton.

Gentlemen:—I regret that some person more competent than myself could not be prevailed upon to address you on the present occasion. I must crave your indulgence in advance, for any imperfections you

may observe in the matter or manner of my discourse, as the call upon me to address you has been unexpected, and I have had but a short time for preparation, amidst the numerous interruptions incident to my profession. It might be supposed that a farmer would be the most suitable person to address a society instituted for the purpose of promoting Agriculture, and other branches of rural economy. There cannot be a doubt that the remarks of a practical farmer would have more weight and authority, than those of a person who merely professes a love of rural occupations, and has paid attention to them, rather as matters of relaxation and amusement, than as the serious business of life.

Those most conversant with the history of Agriculture, will, however, recollect, that many of the greatest improvements made within the last half century in that department of human industry, have emanated from professional men, and from gentlemen who never held a plough, or labor in the field.

Although myself very little of a practical farmer, yet I have had opportunities of witnessing a good deal of farming operations, as carried on in this country, and in some of the most approved countries of Europe; I therefore hope that some of my remarks may be deemed worthy of the notice of the society. This society was instituted for the purpose of carrying into more general practice such improvements relating to rural affairs as are calculated to elevate the character of the farmer, to render the noble business of cultivating the soil more profitable, and to promote the general prosperity of the State. The field of our exertions is not limited to mere agriculture, or the cultivation of the soil, but embraces likewise every thing relating to rural economy.

In the remarks which follow, I shall avail myself of this latitude and trust the society will pardon me if I appear to digress too much from what may be considered the special object of our association.

Agriculture may be regarded as the parent of arts, commerce and manufactures, and the great source of the prosperity of nations. Its history dates almost from the creation of man. In the state of innocence, in the garden of Eden, it is probable that the earth spontaneously yielded all that was necessary for its inhabitants. But immediately after the fall of our first parents, Holy Writ informs us, that Adam was expelled from the garden, "to till the ground from whence he was taken." Consequently, Agriculture ranks first among the arts, not only in importance but in seniority. Of the immediate descendants of Adam, the first born was a "tiller of the ground," and his brother Abel "a keeper of sheep." Here, then, we have, at the very origin of our race, the agricultural and pastoral life commencing simultaneously, although it has been a favorite speculation with philosophers, to designate three progressive stages of society. The first, that in which man is supported by the spontaneous productions of the soil, by hunting and by fishing—the second, the pastoral—and the last, the agricultural stage. Such does not seem to have been the progress of society before the flood, whatever may have been the case since that period. No distinct mention is made of hunting before the time of Nimrod, who is described as "a mighty hunter."

Immediately after the flood, it is probable that the human family had recourse to Agriculture and fishing for their support; for it is fair to presume that the beasts of the field fit for the food of man, were as yet too few to be used for that purpose;—and that therefore they were allowed to multiply for some time without molestation. Warrant was granted to Noah to eat every moving thing that had life—"Every moving thing that liveth shall be meat for you; even as the green herb have I given you all things."

It is not improbable that mankind, for several ages after the flood, remained united, and that Agriculture and the arts had made considerable progress among them. The fact of their being together in such numbers as to commence the building of a city—to make brick, and to use slime or pitch for mortar—and to attempt to build a tower whose top should reach "unto the heaven"—shows that the necessaries of life must have been raised in abundance around them, and that many were enabled to withdraw from the cultivation of the soil, to the arts necessary for the artificial society of a city. But upon the dispersion of mankind, by the miraculous confusion of tongues, whether we interpret the language literally or figuratively, much of the knowledge existing in a dense population must have been lost, as mankind became scattered and ceased to communicate with each other. As few, in all probability, were capable of remaining together, on account of the scantiness of the means of support, a relapse into barbarism was scarcely avoidable. Many, of a roving disposition, would support themselves by hunting, while the more prudent would trust to the rearing of flocks, and a more or less careful cultivation of the soil.

But as they had the whole world before them, it is not probable that there was much industry, or much attention to the arts, for a long period. The pastoral life being the easiest, and less precarious than that of the mere hunter, we find that it was followed by the patriarchs; and recent travellers assure us, that the customs of the nomadic tribes of Asia are not essentially different, at this day, from what they were in the days of Abraham.

In process of time, however, mankind had become so numerous that more attention to the cultivation of the soil became necessary for their support. They began to acquire fixed residences, and to accumulate individual property. Arts and civilization necessarily sprung up among them; and in proportion as Agriculture made progress, nations became civilized, prosperous and powerful. It has always been so, and there is reason to believe it will continue so as long as the world lasts. Sully expressed his conviction of this truth, by saying, that Agriculture might be regarded as the breasts from which the state derived its nourishment and support.

The Jews were an agricultural and pastoral nation, having few manufactures, and but a very limited commerce. Egypt seems to have been the granary of the world during the most flourishing periods of the Jewish monarchy. The natural fertility of the soil of Lower Egypt, caused by the periodical overflowings of the Nile, was probably the cause of this, rather than the skill or industry of her agricultural population. The Greeks are supposed to have derived their knowledge of Agriculture, as well as of other arts, from the Egyptians; but they do not seem to have excelled in the cultivation of the soil. Their country was in many respects unfavorable, being more remarkable for picturesque scenery and natural beauty, than fertility. To render the soil fertile and productive, required more labor than the Greeks felt disposed to bestow upon it. Most of the field labor was performed by slaves; and I believe there never has been a country highly improved by such labor.

The Romans, as they were in all respects a more industrious, a more honest, a more respectable people than the fickle Greeks, carried the arts of husbandry to a higher degree of perfection. From the Georgics of Virgil, and more particularly from the writings of Columella, we gather, that during the Augustan and subsequent ages, Agriculture was practised on correct and regular principles. Columella has left us twelve books on Agriculture and gardening. The style is elegant, and the work is said to display the genius of a naturalist, and to evince an observing mind. Unlike most conquering nations, particularly those of antiquity, the Romans carried with their arms civilization and arts. They did not, in general, burn the towns and lay waste the countries they subdued. Whenever they formed a permanent conquest, they opened roads, built bridges and aqueducts, and promoted Agriculture. All this they might have done, less for the good of the subdued, than for their own security and advantage. But still, if we deny them credit for motive, we cannot in justice refuse to concede to them the merit of having diffused improvement and civilization over extensive regions of the earth, which had hitherto remained in a state of barbarism, and which, but for them, might have remained so until this day. Our ancestors were found by them little better than the savages that roam through our own forests. They went to war, naked and painted, like the Indians of modern days, and do not appear to have made much, if, any, greater progress in the scale of society. The people of the northern part of the continent of Europe were very much in the same condition. But the parts that submitted to the Roman sway, felt the influence of the energetic government of that remarkable people. Towns and cities sprung up in great numbers—the soil became better cultivated—the people (being protected in their lives and property) became numerous and improved—good roads were made almost every where—the cities had baths, and aqueducts, and splendid buildings, not much inferior to those of Italy herself.

I believe it is generally conceded that the theory and practice of Agriculture are, at this time, as well understood in England and Scotland, as in any part of the world. It is well known that few countries have been less favored by nature, either as to soil or climate, for agriculture or horticulture, than Scotland; and yet few countries have done more for the advancement of these branches than she has done. My time will permit me merely to enumerate

the leading means by which this eminence has been attained;—some of the causes which retarded improvement, I have already mentioned.

The direct causes of the advanced state of Scotch husbandry, are chiefly referable to the following: 1st. Careful tillage—thorough ploughing, to pulverize the soil—the removal of weeds, stones, stumps, bushes, &c.—the proper draining of fields, and the use of manures to such soils as were exhaused by long tillage, or were naturally poor. 2d. The regular rotation of crops, varying these according to the nature of the soil. 3d. The general introduction of turnips and clover. 4th. The use of lime, marl, alga marina, and compost manures. 5th. The introduction of improved implements of husbandry—as the plough, the cart, the threshing machine, the fanners, the rollers, harrows, &c. &c.

The triumph of modern over ancient husbandry is due to the introduction and use of these improved implements, more than to any other cause. The ancients separated their grain on a threshing floor erected in the fields, by means of the feet of oxen, or by rude instruments, which injured the grain, and consumed much time; and they depended on the winds for winnowing the seed. The construction of mills for grinding grain, also distinguishes modern husbandry from the ancient. The modes practised by the latter were exceedingly rude: the grain was pounded between stones, or in some kind of mortar.—It is not very long since this practice obtained in some parts of Europe, and is probably prevalent at this moment in some of the new settlements of the United States.

Having given this sketch of the progress of husbandry in the old world, I hope the society will indulge me by permitting a few remarks on the Agriculture and rural economy of this State.

When the province of New-York came into the possession of Great Britain, Agriculture was in a very low state at home. Most of those who emigrated from Europe brought with them little skill and less capital. Land was of little value, and therefore easily obtained. Every body could be (what in Europe is still considered a great distinction) a landed proprietor. Most of the emigrants, therefore, preferred hardships, as proprietors, to comfort as domestics and laborers. The great mass of farmers became lords of the soil, and managed their farms themselves, aided by their children, seldom being able to find people to hire, even if they possessed means for paying them. The virgin soil, however, was rich, and yielded freely, without much labor or expense of culture. Some extensive estates, or manors, existed, in which the farms were in the possession of tenants holding leases, some of which were perpetual—or, as long as water ran or grass grew. The rents were almost nominal.—I believe these were the worst managed farms in the province; and the remark is as applicable, so far as I have seen, at the present day, as at any former period.

The revolution and consequent separation from the mother country, made the change in the general method of farm management. The farms have, until within a very few years, been cultivated with little attention to the improved Agriculture of foreign countries. Crop after crop was taken off, as long as the produce was worth the trouble of cultivation, until the soil became exhausted. Little care was taken to preserve manure—no attention was paid to rotation of crops—stones and stumps were left in the field unmolested—if there existed a wet spot of ground, the ploughman went round it, leaving possession to weeds and frogs—if a small stream traversed a field, it was permitted to meander in serpentine courses, to ornament the landscape by its luxuriant growth of bushes—drains were hardly thought of, and when made, were scarcely ever covered, no matter how abundant stones to fill them might be in the contiguous fields. The effect of this system has been, that in almost all the old counties of this State, the soil has been exhausted, the culture of wheat is given up, and many extensive districts are now chiefly abandoned to pasturage, being no longer fit for profitable tillage. On many farms, the wood has been destroyed, while no attempt was made to remedy the injury by planting. The fences, or enclosures, were of the rudest and worst kinds, while hedges were in many counties scarcely ever seen. Thus beauty and utility were alike disregarded.

Within the last few years, in several counties, much improvement has taken place in every thing that relates to Agriculture; but it is far from being general in any county, and many of the remarks already made, are still applicable, in the fullest extent, to much the greater number of farms in the districts immediately around us.

The great ends contemplated in the institution of this society, were, the improvement of the various branches of husbandry, and the several arts connected with them. Much may be accomplished by a concentration of efforts We have a great deal to encourage us in the success which has attended the exertions of other associations for the promotion of various useful arts and sciences. It is to be wished that gentlemen largely interested in landed property would unite with us, and by their purse and influence, as well as example, aid in promoting objects by which their private interests and the good of the public at large will be simultaneously advanced.

It is desirable that there should be union and uniformity in our efforts. To promote this, I would suggest the propriety of organizing in each county an auxiliary society, and that at the annual meetings of this society, in addition to the permanent members, there should be a delegate from each of the county societies. I would further suggest, the propriety of appointing an executive committee here, at the seat of government, to act during the recess of the State Society in its behalf, to carry into operation such plans as may be adopted for advancing the cause in which we are engaged.

At the last session of the legislature, an act incorporating a State agricultural school was passed. Considerable progress has been made in procuring subscribers to the stock of this school. It is intended, should the necessary amount be subscribed, to select a farm in this vicinity, of the extent of at least five hundred acres, on which are to be erected, on the most approved plans, suitable farm buildings. It is also in contemplation to procure specimens of the most improved implements of husbandry; and that the management of the farm should be conducted upon the most approved principles. Teachers are to be attached to it for instructing pupils in the theory and practice of Agriculture. It is intended, in short, to make it a school for the education of skilful and scientific practical farmers. At present it is uncertain how far these objects can be realized. That such a school is wanted, no one will deny; and that such a school, properly conducted, would be of incalculable benefit to the farming interests of this State, admits of as little doubt.

Something more is necessary than can be obtained at such a school as the Agricultural is expected to be. If it be intended to make the pupils of the school work on the farm, for the double purpose of earning enough to support themselves, and of making them skilful in the practical details of farming, excepting in the winter season, little leisure will be afforded for study.

It appears to me, that there ought to be established here, at the seat of government, an institution founded by the State, and liberally endowed, wherein a thorough education could be obtained in the liberal arts and sciences. The means of the State are ample for the purpose; and as no such institution at present exists within the bounds of the commonwealth, it would seem that no place is so suitable for its location as the seat of government.

At such an institution, lectures on the science of Agriculture might be given during the session of the legislature, so that all who took an interest in the subject might have the benefit of them. The kindred sciences of chemistry, mineralogy, geology and natural history, could likewise be taught. The present time is auspicious for the purpose. A geological survey of the State is now in progress, under the authority of the government. A most important collection of objects in geology, mineralogy, zoology and botany, must of necessity be the result. It is therefore highly desirable that a suitable museum be provided for the reception and preservation of this collection. What place so proper as the capital of the State? Such a collection once made, would be a nucleus around which future additions would accumulate, until at last it might rival in utility, if not in extent, the collection of the Garden of Plants, in Paris. If this first step be taken, under the auspices of the State, there is every reason to hope, that in no long time, we shall possess an university, not in name, but in fact—an university, where the more elementary branches usually taught in academies and colleges should be excluded, while chemistry, agriculture, mining, engineering, geology and mineralogy, natural history, political economy, mental and moral philosophy,

and such other branches as are of sufficient interest to attract pupils, could be thoroughly studied.

The limits of this discourse will not permit me to enter more fully on this subject; I merely throw out the suggestion for the consideration of the Society, so that, if deemed important, it may be acted upon without loss of time.

At the Agricultural farm, pupils might be taught the management of farms, the raising and taking care of stock, &c — Botany and horticulture might likewise be taught and practised there; but the institution in the city, it appears to me, ought to be the place where such as had leisure, or inclination and means, to study profoundly, should resort.

No business is more important, none more honorable, than Agriculture and its kindred arts. The wealth, the power, the morality of a nation, are closely connected with it. Let, therefore, the wealthy, who have the greatest interest, be foremost in its promotion. Let them make gentlemen farmers of their sons, instead of professional men and merchants. Let them give an education such as befits their prospects, and the honorable position they are to occupy in society.

If this were more generally done, we would less frequently see the well earned property of the fathers squandered by the children, or the high professional character acquired by the parent, sullied by the incapacity and indolence of a son, who feels not the stimulus of necessity, to make him tread in the honorable course pointed out to him. The country would become the residence of the most worthy and most gifted members of society;—the wilderness would blossom as the rose, and none would be found to live in cities, but such as could not afford to dwell in the country, or such as, for the love of gain, could submit to temporary banishment for the sake of spending the evening of their days, each under his own vine and fig-tree, remote from the noise and turmoil of the multitudinous city. To all, then, who wish to live in health, comfort and independence, we would say—

"Venerate the plough,
"And o'er your hills and long withdrawing vales
"Let Autumn spread its richest treasures to the sun,
"Luxuriant and unbounded."

N. Y. State Agricultural Society, Albany, February 3, 1837.

Resolved, That the thanks of the Society be presented to Prof. James McNaughton, for his very excellent and instructive address, and that a copy be requested for publication.

From the minutes.

J. K. Paige, Secretary.

On motion of Mr. Beekman.

Resolved, That the thanks of the society be presented to Dr. James McNaughton, for his very excellent and instructive address, and that a copy be requested for publication.

On motion of Mr. Allen.

Resolved, That the thanks of this society be tendered to the late President thereof, for the able and satisfactory manner in which he has presided over the same.

The society then adjourned.

For the New-York Farmer.

Black Fly.—Sow a bushel of dry ashes to the acre on your turnip field as well as all other vegetables of the same class while the dew is on (or are moist) when they are two or three days old, and it will preserve them against the small black fly, should there come rain to wash it off immediately, repeat it, the ashes also is highly beneficial to promote the growth of the young plant. Oftentimes the black fly will take every vestage from the fields and lead a person who did not see his field during the first few days to believe the field bad, and attribute the evil to that cause. Many farmers are well acquainted with the above facts, but they are not generally known—and this may be of service.

A New-England Farmer.

TRANSACTIONS OF THE ESSEX AGRICULTURAL SOCIETY, MASS.

The Annual account of the "Transactions of the Essex Agricultural Society in Massachusetts" has just been published. It is a valuable document; and does honor to this society, which stands unsurpassed in the country for its spirited exertions in the cause of our improved husbandry; and for the zeal, ability, and intelligence with which its operations have been conducted. We have already laid before the readers of the New-York Farmer the sensible address of Nath'l. W. Hazen, Esq., which forms the first article in these Transactions.—This is followed by some remarks from Governor Everet on the same occasion, which are particularly entitled to attention; and which, though they contain some local allusions, we are happy in laying before our readers. Like every thing of the kind which proceeds from that distinguished gentleman, of whose talents, knowledge, eloquence, public spirit, and usefulness the Commonwealth has just reason to be proud, they are to the point; they are feeling, instructive, and patriotic; and the local allusions give them an increased interest.

REPORT—COMMITTEE OF ARRANGEMENTS.

When the discourse of Mr. Hazen was concluded, Dr. Nichols, of Danvers, addressed the Governor and audience through the following Report:—

The Committee of Arrangements ask leave to report:—That they have had the satisfaction of seeing their plans and provisions for the day carried into execution without loss of time, and in a manner equal to their expectations. As a whole, the exhibition has perhaps been inferior to some of the Shows in former years. This they are willing to attribute to the unfavorable season and the inclement weather of the morning, rather than to a want of interest in the Agricultural community in the objects of the Society. The utility of this Association they are happy to believe depends not so much on the cattle and things exhibited at their Shows, as on the opportunities these afford the Farmers of the County, to become acquainted with each other, for consultations on subjects peculiarly interesting to themselves, and for offering up their united adorations to Him who giveth seed time and harvest, and who alone can crown the labors of the husbandman with success.

This day has also been rendered unusually interesting by the presence of His Excellency the Governor of the Commonwealth. In extending to your Excellency an invitation to attend on this occasion, the Committee believe it to be peculiarly proper that an exhibition attained mainly by the bounty of the State should come under the supervision of its Chief Magistrate; and they felt confident that one so distinguished for performing with the strictest fidelity all the duties and proprieties of his exalted station, would be pleased to embrace the opportunity afforded him, to countenance and encourage one of the great interests of the Commonwealth by showing himself personally interested in the success of its Agricultural Societies, and by manifesting a disposition to become acquainted with the wants of the industrious yeomanry of which they are composed. And your presence here,—for which the Committee in behalf of the Society tender you their hearty thanks,—assures them that they have not mistaken your views or feelings in these particulars.

Per order of the Committee.

Andrew Nichols.

REMARKS OF GOV. EVERETT.

After the Report of the Committee of Arrangements had been read, Governor Everett rose and made his acknowledgments to the Committee for the manner in which they had alluded to the circumstance of his being present. He expressed his gratification at the exhibition of the day, and his confidence that the bounty of the State was beneficially applied by the Essex Agricultural Society. He stated that the wish had been expressed that he should address the audience. He felt that in complying with the request he stepped beyond the line of usage on such occasions, but he trusted the responsibility of his doing so would be considered as resting with the Committee, by whom the wish had been expressed.

The Governor added that he felt additional embarrassment in following the orator, who, in his very able and interesting discourse, had anticipated many of the general remarks appropriate to such an occasion. His only effort could now be, to subjoin a few observations, so simple as to present themselves without research, and he hoped important enough to bear a repetition, should it happen, as was very proba-

ble, that they had been already made by the orator of the day.

After some remarks on the nature and objects of cattle shows, and their beneficial influence on the state of the husbandry of this part of the country, Governor Everett proceeded substantially as follows:

The benefit, which has accrued to our farmers from these exhibitions, cannot be estimated in dollars or cents, or measured by the figures employed to state an increase of agricultural products. A few more tons of hay from your meadows; a few more bushels of corn or potatoes from your tilled lands; a better stock of animals for the dairy, the fold, or the pen, would add something, it is true, to the public and private wealth of the community; but if nothing farther came of it, it would be a matter in which neither the patriot nor the christian could take a deep interest.

But when we consider, that the *class of husbandmen* is numerically *the largest* in the community; and that on their condition it has been found, in the experience of the whole world, that the social, political, and moral character of countries mainly depends, it follows as self-evident, that whatever improves the situation of the farmer feeds the life-springs of the national character. In proportion as our husbandmen prosper, they not only enjoy themselves a larger portion of the blessings of life; but society is kept in a healthy state, and they are enabled to make ampler provision for the education and establishment of their children, and thus leave behind them a posterity competent not only to preserve and assert, but to augment their heritage.

It will accordingly be found, that the great differences in the political condition of different countries coincide directly with the different tenure on which the land is held and cultivated. It is not that in one country the Government is administered by an elective President; in another by a limited monarchy; in another by an absolute despot. These things are not unimportant; because forms have a tendency to draw the substance after them. But a far more important question, in deciding the political condition of different countries is, *how is the land held?* The orator has told us what is the case in many parts of Europe but there are countries where the case is still worse. There are countries where the land, the whole of it, is claimed to be the property of an absolute despot,—rather a chief of brigands than a sovereign,—who once or twice a year sends out his armed hordes to scour the territory, to sweep together, without the shadow of law or pretence of right, whatever they can lay their hands on; leaving the wretched peasant little else than what he actually grasps with his teeth. Such is the system introduced into some parts of Hindostan, by their Mahometan conquerors, and it has had the effect of breaking down the civilization of countries once refined, learned, wealthy and prosperous, into a condition very little better than that of the North American savage. Contrast this with the system on which our lands are held and occupied, in pursuance of which as a general rule, it is *divided into small farms*, the property of those who till them, who have every inducement and facility to better their condition, and who feel themselves on an equality with their fellow citizens in every other pursuit. It is plain that over such a population no government could exist but one like that beneath which we live, in which the people are the direct source of power. Where this is the case, it is equally plain that whatever improves and raises the condition of husbandmen, tends directly to sustain and fortify the social fabric.

A very celebrated ancient poet exclaimed, "Oh, two happy farmers! did you but know your blessings." If this could be said of the farmers of Italy, at the close of the civil wars, subjects of an absolute prince, and a part of them only the owners of the land they tilled, it may well be repeated of the husbandmen of New-England, the proprietors of a soil, which furnishes a competence of all the good things of life, and the possessors of an *amount of blessings never surpassed*, if ever equalled. Not among the least of these privileges, is the rich birthright of patriotic recollections which has come down to us from our fathers, and of which no portion of the country has more to boast than the ancient county of Essex. It is no mere compliment, sir;—the county of Essex is a distinguished part of the State. It would be easy, within the limits of this single county, to find, in the history of other times, bright examples of all the traits of character and conduct which promote the prosperity and honor of nations, in peace and war. From the early contest with the Indians and French; from the time when the "Flower of Essex" fell at "Bloody Brook," down to the close of the revolution, the fathers and forefathers of those I have the honor to address, contributed a full share of the counsel and treasure, the valor and blood by which the cause of the country was directed, sustained, and carried through triumphant. Need I go beyond the limits of the town of Danvers? Is it not enough to recall the time, not beyond the memory I am sure of some whom I see before me, when a regiment of royal troops was here encamped, a sort of prætorian band to guard the residence of the royal Governor?—Need I do more than remind you of the morning of the 19th of April, 1775, when your sires, at the sound of the bell of yonder church, hastened together, a portion of them under the command of your venerable fellow citizens near me,* and rushed, rather than marched, to the field of danger, sixteen miles in four hours,—flying into the jaws of death as rapidly as fear commonly lends men wings to fly from it; and contributing,—this single town,—this one little town,—oh, prodigality of noble blood! one sixth of the entire loss of that eventful day. Need I, my friends, for the most touching recollections, go beyond the walls of yonder ancient church, consecrated, as it was, by the strange spectacle, (at the memory of which your tears were called forth afresh, on last year's return of the great anniversary,)—the sight of four of your brave sons wrapped in their bloody shrouds, the honorable wounds which they had received in their country's cause still freshly flowing? Could I before this audience, on such a theme, be wholly mute, would not the gray hairs of the veteran leader of that heroic band, who is now before me,* rebuke my silence, and put a tongue in every echo of this building, which would cry out and shame me!

Yes, fellow citizens, if any thing could make your native land, your homes, your firesides, more dear to you, it must be these recollections of the precious blood by which they were redeemed. If any thing was wanting to inspire you with a passionate attachment to the blessing you enjoy, it would be the thought of the inestimable price at which they were purchased.

Nor let us forget, if we have a patriotic ancestry to be proud of, and if we have privileges to enjoy, we have also incumbent duties to perform. The great principles of republican liberty are exposed to danger in peace as well as in war. Prosperity, not less than trial, may sap the foundation of the social fabric; and there is at all times less danger from a foreign foe, than from party passion, individual selfishness, and general apathy.

It will not, of course, be expected of me to enlarge upon the duties which devolve upon our husbandmen, with a view to guard against these dangers and perpetuate our institutions in their purity. I can but glance at the topic. But I may say, that the first and most important duty of the husbandman, is to endeavor to preserve and if it may be to strengthen, the broad foundation laid by our fathers in a deep religious principle. Surely there is no class of the community whose daily pursuits ought to furnish greater nourishment to the sense of religious things. The reflecting mind, it is true, beholds traces of a higher wisdom and goodness in every step of every walk of life; but the husbandman who drops a seemingly lifeless seed into the cold damp earth, there in great part to decay; who sees the vital germ in a few days pierce the clod, rise into the air, drink the sun's rays and the dews of heaven, shoot upwards and expand, array itself in glories beyond the royal vesture of Solomon, extract from the same common earth and air a thousand varieties of the green of the leaf, the rainbow hues of the petals, the juicy or the solid substance of the fruit, which is to form the food of man and his dependent animals. I say, the intelligent husbandman who beholds this, seems to step behind the veil which conceals the mysteries of creative power, and sit down (if I dare to speak) in the laboratory of Omnipotence.

Connected with the cultivation of the religious principle, and the natural fruit of it, we look to our husbandmen for a high *moral sense*. The worst feature in the degradation of many foreign countries, is the moral condition of those who till the soil, showing itself in the extreme of intemper-

* General Gideon Foster.

* General Foster.

ance and the kindred vices. No man can fully understand this, who has not witnessed it. In the general moral character of our population, we are warranted in saying, that it might serve as an example to the world. I do not think that out of New-England (and I repeat only a remark, which, within a few weeks I have heard several times from persons coming from other parts of the country,) yon could assemble a concourse giving so much proof of sobriety, thrift, and industry, as is brought together in this town to-day, and might be assembled, on a similar occasion, in any town in Massachusetts. We look to our husbandmen, by precept and example to sustain, and if possible elevate, this sound state of morals in the community.

Lastly, that I may say a single word on a subject on which the orator has preceded me. It is a great and just boast of the pilgrims and their descendants, that they made early and ample provision for education. Farmers of Essex, hold fast to that boast. I had rather for the appearance, if I must choose between them, see the country dotted all over, at its cross roads with its plain little village schoolhouses, than have the high places of a few large towns crowned with the most splendid fabrics of Grecian and Roman art. I had rather for the strength and defence of the country,—if I must choose between them,—see the roads that lead to those schoolhouses thronged with the children of both sexes, saluting the traveller as he passes, in the good old New-England way, with their little curtesy or nod, than gaze upon regiments of mercenary troops parading upon the ramparts of impregnable fortresses.—Ay, for the honor of the thing, I had rather have it said of me, that I was by choice, the humblest citizen of the State making the best provision for the education of all its children, and that I had the heart to appreciate this blessing, that sit on a throne of ivory and gold, the monarch of an empire on which the sun never sets. Husbandmen, sow the seed of instruction, in your sons' and daughters' minds. It will grow up and bear fruit, though the driving storm scatter the blossoms of spring, or untimely frost overtake the hopes of autumn. Plant the germ of truth in the infant understandings of your children—save, stint, spare, scrape,—do any thing but steal,—in order to nourish that growth; and it is little, nothing to say, that it will flourish when your grave stones, crumbled into dust, shall mingle with the dust they covered—it will flourish, when that overarching heaven shall pass away like a scroll, and the eternal sun, which lightens it, shall set in blood!

Then follow the Reports of several committees and the annunciation of the successful competitors for the Premiums on the Dairy, on Milch Cows, on Domestic Manufactures, on Cider, on Ploughing, on Bulls, Working Men, Steers, and Calves, on Fruits and Flowers, and on Horses.—These are followed by a valuable communication from Van Mons in improving Fruit Trees translated for the Horticultural Register by Gen. H. A. S. Dearborn, a gentleman distinguished for his scientific and practical skill in Horticulture; and to whose intelligence and public spirit the Horticultural and Agricultural Public are longly indebted. All these purposes are deserving of attention.

DAIRY. Ebenezer King, the gentleman who received the highest Premium for his June butter, states "that he presents thirty nine pounds and three quarters made in June; also fourteen pounds made two weeks since: and seven pounds made during the last week (dated Sept. 28th,) the produce of one cow. The cow has given at a milking twenty-six pounds, her feed has been principally ordinary pasture; occasionally she has had three pints of corn meal per day. Her milk has set twenty-four hours, when the cream has been separated; has been churned once a week; the butter milk pressed out; and the butter kept in strong pickle."

We subjoin to this account that of Daniel P. King, Esq., on the same subject, a successful competitor, and in all respects, one of the best farmers in the county.

"The Stone jar marked 1, contains about thirty pounds of butter, made in the last week of June from the produce of six cows; they had common pasture feed only; the milk stood in tin pans in a cool cellar thirty-six hours; the cream was then separated, and placed in pots on the cellar floor; in warm weather fine salt is stirred in the cream to prevent its souring. When the butter is taken from the churn, the butter milk is pressed out, it is partially salted and remains in the cellar till the next day, when more salt is added; and it is again worked over; the quantity of salt used is about one oz. to the pound. The butter in the jar has been covered with a pickle, made of rock salt, boiled, and carefully skimmed."

The produce of four cows, as given by Jacob Osgood, of Andover, is thus stated.

New Milk Cheese from the 9th of July, to the 10th of September, 435 lbs.
Butter from 1st of June, to the 9th of July, and 17 days in September, 145 "
Amount of 6 meal cheese made during the time of making butter, 294 "

The cow of Daniel Putnam, which received the first Premium as a milch cow, of native stock, from the amount of her produce, certainly deserved a premium.

"This cow calved May 21. The calf was sold June 20th for $7.62½. During the thirty days that the calf sucked, there were made from her milk 17 lbs. butter. From June 20th to Sept. 26th (14 weeks she gave 3370 lbs. of milk, making a fraction more than 34 lbs. and 6 oz. per day. The greatest quantity on any one day was 45 lbs. or 17 quarts and 1 pint—for the weight of a quart of her milk is 2 lbs. 9 oz. The greatest quantity in one week was 288 lbs. The quantity of butter made in the same fourteen weeks was 139 lbs. The greatest amount in one week was 12 lbs. 2 oz. The cow has had good keeping. In addition to the pasture she has been frequently fed with fresh mown grass and corn stalks. She had about four quarts of cob meal (corn ground on the cob) per day, through the summer."

The Report on Domestic Manufactures gives a long list of premiums, fifty-two of which seemed to have been bestowed, and we have no doubt most justly upon the five seamstresses and knitters of Essex county, for beautiful and useful specimens of their patient handicraft; and presents to those in pursuit of that most useful commodity, an industrious wife, a pretty emphatic recommendation of the fair daughters of this favored district, long distinguished for the intelligence and patriotism of its men; and the virtue and industry of its women. Of this county, the poet may say emphatically,

"There is the noblest growth our realms supply;
And souls are ripened in a northern sky."

IMPROVING FRUIT TREES.

Among the illustrious benefactors of mankind, the name of Van Mons* seems destined to hold a conspicuous place. By almost incredible labor, perseverance, and constancy of purpose, through a long succession of years, he seems to have established a philosophical theory of improving or ameliorating fruit trees and other productions of nature, worthy of a place by the side of the wonderful discoveries and improvements in other branches of philosophy which characterize the age of Herschel, Sir Humphrey Davy, Cuvier, and a host of other distinguished contemporaries,—

"Whose names must honored live, till science dies."

From a long article in the Horticultural Register and Gardener's Magazine of June, 1836,—communicated by Hon. H. A. S. Dearborn,—we have compiled the following, which we think cannot fail of being interesting to a large portion of the members of the Essex Agricultural Society. A. N.

VAN MON'S THEORY OF AMELIORATING OR IMPROVING FRUIT TREES, BY RAISING SUCCESSIVE GENERATIONS FROM SEED.

So long as plants or trees remain in their natural situation, their seed always produce the same; but on changing their climate and territory some will vary more or less, and when they have once departed from their natural state, they never again return to it, but are removed more and more by successive generations.

The seed, for example, of the wild pear trees, in their native region, always reproduce their like at every age; that is, be the

* Professor of Chemistry at the University of Louvain, Belgium.

tree twenty or a thousand years old at the time the seed is taken from it, the fruit of its offspring trees will be precisely like that of the parent stock. But the seed of a dom sticated pear tree, that is, a tree which produces better, or at least a different kind of fruit from its wild ancestors, produces trees not only very different from itself and them, but this difference will be greater if the seed be taken from the young seedling's first or early fructification, than it will be if taken from the same tree after it has been many years in bearing.

To improve or ameliorate fruit trees, therefore, as expeditiously as possible, young seedlings should be forced into bearing as early as may be, and the seed first produced planted. Pursuing this method, Van Mons, notwithstanding the seed that he was obliged to use in his first experiments were obtained from ancient varieties, whose age, although uncertain, was much advanced, was enabled to reach, in forty two years, the fruit of the fifth generation of his pear trees, all of which was good and excellent. His first generation yielded their first fruit in from twelve to fifteen years, his second in from ten to twelve years, his third in from eight to ten years, his fourth in from six to eight years, and his fifth in six years, and in the eighth generation he obtained a few pear trees which fructified at the age of four years. He also found that three or four generations without interruption, from parent to son, and from twelve to fifteen consecutive years, were sufficient to obtain no other than excellent fruit from the stones of peaches, apricots, plums and cherries;—that to obtain none other than good apples, only four generations, and about twenty years, were required.

Such, briefly, according to Van Mons, is the philosophy of improving fruit trees.—But why, it may be asked, if fruit trees are capable of such rapid improvement, by reproduction from seed, do so few seedling trees among us produce good fruit? From the theory of Van Mons may be obtained a philosophic answer to this inquiry. Trees, like all other organized beings, have limited periods of youthful growth, maturity, and decay. Trees propagated by cuttings, scions, &c., are only the multiplication of individuals, and subject to the same great law of nature. Their age, however late they may have commenced an independent existence, must be considered the same as that of the parent stock, and when the full period of the natural life of the original tree shall have been completed, will cease to exist. Age alone, according to Van Mons, causes our fruit trees to deteriorate, and their seeds to degenerate. Seed, he says, which are yielded by the hundredth fructification of a domesticated pear of excellent quality, produce a great variety of trees, whose fruits, almost always detestable, are more or less near to a wild state. Seedling trees, with us, have generally been the offspring of old varieties; hence they have seldom produced good fruit. Whoever, therefore, may possess young seedlings which produced good fruit, would confer a great favor on the community by preserving the seed for planting. It has been ascertained that it is advantageous to collect the fruit a little before it is ripe, and leave it to become perfectly mellow and reach a state of decay, before extracting the seeds or stones for planting. The apple is said to deteriorate less rapidly, and to live longer than the pear.

The subject of deterioration naturally leads us to inquire how many years a variety of pear may live. Van Mons estimates that it may live from two to three hundred years. But I have remarked, he says, that the most excellent, beyond all others, least resist the ravages of old age. They cannot attain the age of half a century, without manifesting symptoms of decrepitude. The first of these symptoms is that of bearing less constantly and the fruit ripening later. The decay of the wood, and the loss of the beautiful form of the tree, and the alteration of the fruit, follow at much later periods. The varieties that have existed but half a century, do not suffer from canker at the ends of the branches, nor from diseases of the bark; the fruit does not crack, nor is it filled with a hard substance, covered with knots, nor insipid or dry.—These varieties can still be grafted on other trees, without their infirmities being augmented. It requires half a century more to render them worthless. It is painful to think that soon the St. Germain, the Beurre Gris, the Crassanne, the Colmar, and the St. Michæls, must submit to this destruction. None of these varieties succeed any longer in Belgium, except when engrafted on a thorn, and as espaliers, trained against a wall; but this success is at the expense of their commendable qualities.

Van Mons does not attribute the deterioration of fruit trees to their multiplication by repeated engrafting, but contends that natural and grafted trees deteriorate in the same manner and with the same rapidity, in consequence merely of their age. He discovered in an old garden of the Capuchines, the parent tree of the Bergamote de la Pentacote, an old pear. All the trees grafted from it are affected with canker, in slightly moist land, and the fruit is small, cracks when growing in the open air, is covered with black spots, which communicate a bitter taste, and no longer succeeds, but when trained as an espalier along a wall. The parent tree was infected with all the evils found in those grafted from the same variety. He took suckers from the roots and scions at the same time, which he grafted on other stocks, and the trees produced by both were deteriorated in the same degree and manner as those which have been for a long time multiplied by the graft. Poiteau, the admirer and panegyrist of Van Mons, thinks, however, that this rapid deterioration of fruit trees may be somewhat delayed if scions be always taken from the most healthy individuals and inserted only into vigorous stocks.

Van Mon's method of raising fruit trees from the seed was as follows. He left the plants in the seed bed two years; he then took them up, preserved and transplanted only the most vigorous, at such a distance one from the other that they could thoroughly develope themselves and fructify. He planted them about ten feet apart, sufficiently near to force them to run up tall and form pyramidal tops, which he states hastens their fructification. While waiting for his trees to produce fruit, he studied their form and physiognomy, and from long continued observations established the following prognostics of what they may become, from their different exterior characteristics.

1. *Prognostics of a favorable augury* — A good form, a smooth and slightly shining bark, a regular distribution of the branches in proportion to the height of the tree; annual shoots bent, striated, a little twisted, and breaking clear without splinters, thorns long and garnished with eyes or buds nearly their whole length; eyes or buds plump, not divergent red or grizzled; leaves smooth, of a mean size, crimped on the side of the middle nerve, borne on petioles (the stem of the leaf) rather long than short, the youngest in the spring remaining a long time directly against the bud, the others expanded, hollowed into a gutter from the bottom towards the top, but not their whole length.

2. *Bad prognostics.*—Branches and twigs confused, protruding like those of the hornbeam, thorns short without eyes; leaves averted from the bud, from their first appearing small round, terminating in a short point, guttered their whole length. These characteristics indicate small fruit, sweet, dry and late, fit only for baking.

3. *Prognostics of early fruit.*—Wood large, short; buds large and near.

4. *Prognostics of late fruit.*—Wood slim, branches well distributed, pendant, the shoots a little knotted, generally denote late delicious fruit; with leaves round, point short, stiff, of a deep green, borne on petioles of mean length, are analogous signs, but less sure.

Van Mons remarks, that among the new pears which he has obtained, there are some which were several years in taking a fixed form; that several did not assume one for from twelve to fifteen years, and that others never did. Our old varieties, without doubt, have been in the same situation, and he gives as an example of pears that have never assumed a determinate form, our Bon Cretien de Hiver. Still it is most easily recognized, notwithstanding the variation in its form and size.

THE SEASON.

The opening of the Farmer's year is always a season full of activity; exciting in the highest measure to his hopes, and demanding his patient and persevering toils. Not a day should be lost, and every hour has its value. No exertion in a later season can repair the losses, which are now permitted; and it is idle to think of doing in summer or autumn, that which should have been done in the spring. The committing of the seed to the ground, in the humble and sure confidence that the labor will be rewarded, and another, and infinitely higher power will bring it to maturity, is an operation deeply affecting to a thoughtful and pious mind. The point where human instrumentality terminates, and the unseen but all operative agency of an infinite and unceasing Providence, must do the rest, is soon reached, and impresses the susceptible

mind with a strong feeling of confidence and dependance; and as the seasons roll on and the harvest is gradually matured, "first the blade, then the ear, after that the full corn in the ear," it must, unless thwarted by the debasing and sordid influences of avarice and sensuality, inevitably carry up the mind to that great and bountiful Being, 'who is over all, through all, and in all things.'

Ploughing.—The first great operation of agriculture is ploughing. The manner in which this is executed is of great importance. The improvements, which have been made within a few years in the construction of our ploughs, has been of incalculable advantage to the whole country. In time, in ease of draft, in the manner in which the work is executed, in the reduced cost of ploughs and the lessened expense and general facility of repairs, the value to the country from the introduction of Freeborn's or Wood's cast-iron plough, and the subsequent improvements upon it—the advantages must be estimated by millions of dollars. The improvements in the modes of executing the work correspond with those made in the form of the instrument. Our ploughing, at least in New-England, was customarily and almost universally executed in the most slovenly manner. The introduction of improved ploughs, the example of laborers from abroad who were trained exclusively to holding the plough from their childhood, and the emulation excited by our annual ploughing matches, have almost entirely changed the face of things in this matter; and in every part of the country, instead of the rough, unfinished, broken, half-laid soil, we see examples of straight furrows, neat head lands, and a smoothly laid surface. Improvements are still needed and desired; but good examples being given and a spirit of emulation awakened, they will follow of course.

The depth of ploughing is one of the first points to be considered. To prescribe the same number of inches for all soils and for every kind of product would be absurd.—Two things are to be considered in the first place: the procuring of an immediate crop or the permanent improvement of the land; and the nature of the sub-soil. The principles and stimulants of vegetation are all to be found in the vegetable mould or loam, which is on the surface; but the inert matter, or substratum on which it rests, though as it lies beneath the mould undisturbed wholly unproductive, yet by being brought to the surface, broken by the plough, intermixed with the vegetable mould, and exposed to the atmosphere and the light, after a while becomes changed; and in many cases acquires a high degree of fertility. This however, is a slow process; and by deep ploughing, bringing this cold and inert substance to the top, and burying the vegetable mould under it far remote from the great stimulants of vegetation, light and air, the ground is doomed to a long sterility; Chaptal says, "for example, that if a soil is situated upon a vein of earth charged with black oxide of iron, or upon a bed of marl, the mixture which would be produced by deep tillage, would reduce the land to almost entire sterility for two or three years. I have myself experienced this result, and I speak from personal knowledge. Near a forest of oaks, upon one of my estates, the land which had been cultivated, was of an argillaceous character for about six inches in depth; under this lay a bed of very dark brown earth, of five or six inches in thickness; and composed of silex, clay, and oxide of iron. I caused the two beds to be broken up and mixed well together with the spade. The first year the harvest from it was almost nothing, much less than before, though it had never been fertile. The second year it was a little more productive; but it was not until the fifth year that it recovered its usual degree of fertility." There are cases, however, as where a siliceous reposes upon an argillaceous soil, where the intermixture must be advantageous. It should, however, be done gradually; and by successive ploughings, year after year, and the application of suitable manures, we shall at the same time greatly improve the soil. For immediate advantage, however, it is certainly best not to go into the sub-soil, but to avail ourselves of the soil as it is already prepared. This practice of burying the loam and the manures, which we apply as deep beneath the surface as we can drive in the plough, is husbandry strongly reprobated by the opinion, and as strongly condemned by the experience of the best cultivators. Next to deep ploughing, the complete inversion of the sod, where the land is newly broken up, is of the first importance; that the vegetable matter on the surface may be made by its perfect decomposition to contribute to the nutriment of the growing plants, which it will not do, if left exposed to the sun and air; besides the inconvenience and increased labor of cultivation, where the sods, not being turned over, as we see in many examples of bad husbandry, the grass starts again all over the field.

Another point, which we deem of great importance, is to plant as soon after ploughing as possible. The powers of vegetation are never so rapid as immediately after the stirring of the earth. We could give a plausible theory for this statement, but we prefer to leave the fact; which the most careful cultivators have often remarked, to speak for itself. For the same reason we would dissuade from too much cultivation before the planting. In crops that are to be cultivated afterwards by the plough and hoe, the ploughings should take place successively as the crop advances, and as frequently as convenient (until the crop is so far advanced that the movements of the plough or cultivator, would much injure the roots of the growing plant), so that it may have the great benefits of the fresh stirring of the earth. In other cases, where the tillage is made as fine as possible before planting, the powers of the earth seem to be in a degree exhausted, and the decaying vegetable matter, which was buried at the first planting, is brought to the surface, and its nutritious gases exhaled without benefit.

Manuring.—In the application of animal manures to arable land, various questions are often proposed, which ought long since to have been considered as settled. Manures in the first place should be applied in as green a state as they can be found in. The fresher they are, the more efficient. They lose very much of their efficacy by being kept until after the power of fermentation is gone. The only strong objections to the application of manures in a green state, is, that the seeds of weeds mixed with them are likely to stock the fields with a prolific crop of these pests of the husbandman. The superior efficacy of green over manures, which have become comparatively effete, is more than an equivalent for the extra labor, which they occasion. Besides the lessening of the efficiency of the manures by keeping them over the year, there a very great diminution of the actual quantity, amounting in many cases to a full third. There is thought to be another difficulty; and that is in their application. But they can in general be sufficiently covered by harrowing or a light ploughing; and the nearer they are kept to the surface, without being wholly exposed, undoubtedly the better. In Mr. Earl Stimpson's cultivation there seems no great solicitude to cover them at all, excepting as they are gradually intermixed with the soil by successive ploughings and by the growing crops. The application of old manure in the corn hill will bring the corn forward early; and if, at the same time, there has been an ample quantity spread on the land, its vigor may be maintained; but, if all that has been applied, has been deposited in the hill, the plants as they entered their roots beyond the hill, will become checked in their growth and suffer for want of nutriment at the very time when it is most needed, when the grain is forming. The practice of manuring in the hills likewise tends to introduce worms to the root of the plant by which it is frequently cut off. The manure being spread evenly over the and, the general improvement of the land

is much more promoted than by depositing it in the hills. Potatoes manured by animal or stable manures in the hills, acquire a taste from the manure—at least they are in a degree affected by it; and they are much more likely to be affected by drouth and worms.

Ploughing, manuring and seeding, are, all of them, processes which cannot be too exactly and neatly performed. The cultivation is always easier; besides the satisfaction and pleasure derived from seeing such neatness and regularity as the crops advance, rather than crooked lines and missing plants, and extensive baulks, would be an ample compensation for any extra labor, if indeed there were any, which I believe there is not.

Seeding.—It is very poor husbandry to be sparing of seed. We can easily remove a superabundance of plants; and if they are numerous, there is great advantage in being able to select the most thrifty. A very successful farmer on Connecticut River, is of an opinion that two and a half bushels of seed is not too much for an acre of wheat, and believes from his own experience that when sown thickly, it is much less liable to be blasted. He holds the same opinion as to Rye. He remarks, too, that early sowing with oats has secured him a good crop, when late sowing has generally failed. We believe that Indian corn can hardly be planted too early, provided only it can be saved from wet and frost. We are inclined to give the same direction as to potatoes, certainly as to these, the La Plata or Long Reds for instance, which require a long season.

H. C.

Agricultural Survey of Massachusetts.

It has been proposed in the House of Representatives of Massachusetts, to procure an Agricultural Survey of the State, and a project for that object, after having been submitted to the Committee on Agriculture, has been unanimously reported to the House, who have adopted the report by a handsome majority. The subject has been sent to the Senate and now waits their approval. It is strongly to be hoped, that this body will see in their just light and proportions the importance of this measure; and the immense advantages, which, if well executed, must result from it.

Agriculture is, always has been, and must always continue to be, the commanding interest of every community. The earth is the great source of supply and subsistence to all men, and the cultivation of the earth the only means by which this supply can be obtained. But successful cultivation depends on knowledge and skill. Skill must have its foundation in knowledge, and knowledge can be gathered solely from inquiry and experiment. It is of the first importance, therefore, to ascertain what the farmers are doing; what they have done; and where success or ill-success have followed their labors; to learn as exactly as possible, by what means success has been obtained, or in the other case, what have been the causes of their disappointment. This can only be done by going among the farmers; by inquiries addressed to them personally; and by the personal inspection of their farms and their crops. Farmers are always strongly averse to communicating the results of their farming on paper, or to the public prints. They often take a great pleasure and a laudable pride in doing this orally. An intelligent and competent surveyor will be able to obtain this information, and give it to the public. Farmers, generally confined at home, are often profoundly ignorant of valuable improvements in cultivation, which are made in other places, though it may be not remote from them. Now it is most obvious that a knowledge of the modes of husbandry, pursued by different farmers, in various parts of the commonwealth, must be highly advantageous to all other farmers in other parts of the State. The celebrated Bakewell always strongly advised Farmers occasionally "to go from home and see what other people were doing." It is always likely to lead to the knowledge of most valuable facts; and the very fact that their farms are to be inspected and their modes of management inquired into, will, in itself, excite great attention on this subject; and especially lead to habits of examination and exactness, which are of the highest value in a practical view.

The agricultural powers and resources of the State, what it does, what it is capable of doing, can only be known by a thorough and exact survey. That the State is capable of arriving much nearer to the supply of its wants than it now does, there can be no doubt; but nothing is so likely to convince the farmers of this important fact and stimulate their exertions to accomplish all that may be profitably done, as a thorough and intelligent survey. The advantages of such a survey, if well executed, are incalculable; but many of them are so well set forth in the report of the Committee, that we think we shall be doing the public a service by inserting the Report* entire.

H. C.

* The Report is mislaid, and we shall endeavor to obtain another copy for our next.

To the Editors of the New-York Farmer.

Gentlemen:—It was my intention to have sent you the following communication, on the subject of planting Trees, long since; but through untoward circumstances the time has escaped and the season for making such improvements is almost here; however, as it is never too late to do good, I send it to you, and it is at your disposal.

Cold Spring, March 1837.

Richard M. Conklin.

As the winter months roll slowly along, and spring impercepibly approaches, it is natural for the farmer while he enjoys his fire-side, to consider what he should first direct his attention to, in the way of improving his paternal acres, when that period arrives. Among the most prominent objects is the planting of trees; which may be done as soon as the frost releases the earth from its iron grasp, and nature revives from her death like sleep.

To the farmer who possesses a taste for the beautiful scenery of the country, I hardly need say how much it adds to that scenery, if it is embelished by snug dwellings, whose velvet lawns and gentle slopes are ornamented with trees, offering a cool retreat from the noon-tide heat. But alas! how often in our walks do we see the habitation of the farmer standing exposed to the burning rays of the sun, with not a single tree to offer its grateful shade, or relieve the eye with its green and refreshing verdure. It is indeed a charming sight, when the hills begin to extend their lengthened shadows and their purple peaks are illuminated by the parting rays of the sun, to look from an eminence into a quiet vale and behold the curling smoke arise from neatly painted or whitewashed cottages; but how much is added to the scene, if the white fronts of those cottages should peep from among trees, planted by the hand of industry and taste. The delightful fragrance too of many of our ornamented trees and shrubs is a sufficient reward for all the tronble and expense of planting. But, as I am addressing myself to that class in our community who are, in a good degree, obliged to make pleasure and profit go hand in hand, it will not be amiss to say that nearly all the varieties of fruit bearing shrubs and trees are both profitable and ornamental, and by no means deficient in fragrance. The grape vine for all of the above qualifications is conspicuous.

The highways are susceptible of being ornamented too, by the planting of trees, they offer to the weary traveller a resting place by the way side, while he may repose until his exhausted frame is renovated.

For the last mentioned purpose, the yellow locust is admirably adapted, in a favora-

ble soil it grows rapid, stands erect, and when in flower is a beautiful and fragrant tree: indeed the importance of this tree as a matter of profit, induces me to urge upon the young farmer the necessity of attending to it in season. There are but few farms which will not, upon examination, furnish many waste places for the introduction of this valuable timber. There are many however, who live years on their farms without making the least effort toward this improvement, under the impression that perhaps they may never live to see the trees grow up large enough to be valuable. In reply to such objections I would observe, that should the farm pass from necessity out of the hands of the original owner, after he had improved it in the manner above named, yet it would command a much greater price; but on the contrary, should he hand it down to his posterity, surely it would afford him much more satisfaction in the evening of his days to reflect, that, instead of letting the golden moments escape, he had seized the opportunity and laid the foundation for a valuable inheritance for his children.

About ten years since I came into sole possession of a farm which consisted of one hundred and forty acres of land, twenty of which were hilly wood-land; the rest, excepting four acres of wet meadow or swamp, was arable. On looking about I found many waste places in the woods, along the roads, lanes, and fences where I could introduce locust trees. I accordingly set to work, and planted out at least five thousand. Many of these were set in the woods where the timber had been lately cut off: these are growing rapidly, and nearly all of them in a few years will be valuable timber. By replacing those which died the number probably had been kept good. It has been found by observation that locust on Long Island, from the time of planting until grown to sufficient size for timber, averages in yearly growth twelve and a half cents per tree. A few years since I sold a tree which had grown upon an average, sixty-two and half cents per year. The tree was sold as it stood, and the age was ascertained by counting the circles exhibited on the stump after sawing it off; according to which the tree had stood fifty years.

If locust timber grows in value as I have stated, and the farmer plants on a farm of one hundred and fifty or two hundred acres, five thousand trees in favorable places, those five thousand trees at the end of twenty-four years will be worth sixteen thousand dollars: no ignoble sum for a man to realize from the planting of trees.

Before I leave this subject, I feel it as an imperious duty to caution the public against purchasing seed in the city of New-York, and other places sold under the name of yellow locust seed; by far the greater part of this seed is a spurious kind; and some of the most noted seed stores in New-York have furnished a goodly quantity of this degenerate article.

At some more convenient time I will give my readers at large against the planting of the above mentioned seed, at present I will conclude by pointing out the visible difference between the genuine and the above mentioned spurious kind of locust, which will be nearly as follows, viz.

1. A proneness to branch into equilateral shoots.

2. An inclination to bear seed in pods nearly as large as some of our garden beans, so that a tree of two inches in diameter is frequently loaded with them.

3. The heart wood instead of being yellow exhibits a blue tinge.

4. The grain of the wood is not straight, or easily riven, but appears stringy and tough.

5. In seasoning it inclines to shrink and split.

R. M. CONKLIN.

DOMESTIC ECONOMY.

HANG OR DRIED BEEF.—Take eight ounces of common salt, two ounces of saltpetre, made into brine. This quantity to be applied to ten lbs. of Beef. It should lay in the brine four weeks; and then be hung up in the kitchen or some warm apartment to become dry. In order to preserve it from insects in summer, it should be tied up in a linen cloth.

The above receipt was given me by an excellent farmer and manager in Massachusetts; and the beef *cured by it* was of the finest description. H. C.

SALT OR CORNED BEEF.—One peck of coarse salt, four ounces of saltpetre, one and a half pound of coarse brown sugar. Add to the above ingredients, four gallons of spring water; boil and skim it until it is quite clear; when cold it is fit for use. The meat, either beef or pork, should be salted a few hours before it is put in the pickle. Hams and Tongues are very fine cured with the same pickle.

The above receipt is called Admiral Pococke's pickle, and is much approved and generally used in the British Navy. I have successfully tested its value. H. C.

HOUSEHOLD SOAP.—Put fourteen lbs. of Potashes to twenty lbs. of good grease for one barrel. Put the potashes into two pails of water over night; put the grease into a kettle and pour the potashes over it; let it boil moderately, filling it up with cold water until it thickens; then put it into the barrel, and fill it up, (a pail full at a time stirring it about until the barrel is full.

SOAP MAKING.—The subjoined is from a friend as well skilled in all matters of domestic economy and household management, as any one I have ever known.

H. C.

The last Soap I made, we used 20 lbs. of potashes and 25 lbs. of grease to a barrel; and it made excellent soap. Success much depends on having the best quality of potashes. I have a set-kettle in which I dissolved the potashes and put it into the trough in which we keep the soap; then melt the grease and put to it, the mass is then hot; having conveniences for heating the water, I have generally filled it up keeping the whole hot; by this means the ingredients incorporate quickly; and I have had but little to do after the first day. But I do not add the whole of the water at once. I prefer doing it by degrees, and stirring well at each time. There will be no difficulty, if you have good materials; and get them thoroughly incorporated. I have no doubt it may be effected as surely with cold water after the ingredients are mixed and put together; but it will require longer time and more labor to stir it. I have been troubled a little once or twice by getting weak potashes; and have been obliged to add more, but have always succeeded in the end.—Once I recollect I put more potashes than usual, and it was too powerful. I then added more grease and water and reduced it; the above proportion, I think, is about right, if the materials are good; if the potashes should prove otherwise, more may be added.—[Brookline.] B. G.

SALT HAY FOR MANURE.—Mr. E. B., of Lynn, Mass., is of opinion that Salt Hay is worth five dollars per ton, for manure, to be spread on mowing land. He says he once spread a quantity of salt hay in the spring of the year on some low grass land, and the yield of grass was as great as ever had been under any circumstances. It is very valuable as litter under cattle and forms a most valuable ingredient in compost. The above authority is that of a most careful and honest farmer; and deserves entire confidence. Salt hay is generally estimated at two-thirds the value of English. There are several kinds of it; some of it too coarse for any purpose but that of litter. We speak of the finest quality; when well cured it is eaten with great avidity by the cattle, and is substantial and nutritious. It will not answer for milch cows, as it very soon diminishes the secretions of milk. Of course it cannot be often afforded to use it for manure. In cases of extraordinary abundance, however, or low price of English hay; or of damage to the salt hay in curing from the tide or rains, it may sometimes be profitably applied as manure. The fact of its successful application in this way is at least worth recording. H. C.

POTATOES FOR SEED.—"For years past, says one, I have observed in my fields of potatoes, some to come up with a large and thrifty stock or shoots, and others that were small and feeble; and all in the same hill; and when dug, I feared as much difference in the potatoes as in the tops, which caused me to bestow some thought on the subject; and I concluded it would not be in the soil, but in the seed. In order to bring the subject to the test as well as I knew how, I took a parcel of potatoes all of one sort the last spring, cut off the seed ends enough for two rows; the other part of the potatoe I cut sufficient for two rows more; and planted them side by side and at the same time.—Those from the seed end had as might be supposed the greatest number of shoots, but much smaller and less vigorous, and continued so until harvest. Those from the stem ends produced the largest, fairest, and most in measure, but not the most in number.—Fair, good sized potatoes should always be selected for seed; and if the seed ends be avoided, I think it the better. As to the best soil for good table potatoes, I have no hesitation in saying that good, light, loamy land is the best; a moist, strong soil may, and doubtless will, produce the most in quantity. Fresh or green stable manure should never be put into the hill; if used at all, it should be spread, and ploughed, and harrowed in."

I give the above account and directions only upon newspaper authority. They seem to me quite worth verifying by careful experiment. The use of stable manure in the hill for potatoes, designed for the table, is to be entirely disapproved. Plaister of Paris applied in small quantities in the hill we have found serviceable; and the experiments of others have confirmed our experience. Sea sand in the hill, where the potatoes were planted in a peaty soil, moist and heavy, has proved an excellent manure. In our old lands, which have been long cultivated and highly manured, it seems difficult to raise potatoes of a very good quality for the table; and they are seldom comparable to potatoes grown on a new soil; and especially on land recently cleared and in a moist climate.—This fact is well settled, but the philosophy of it is yet undetermined.

Potatoes are one of the most valuable of our agricultural products; and in spite of all that the sarcastic pen of Cobbett has uttered against them, there is no product cultivated among us that yields more in quantity, or more nutritious food, for man and beast, per acre. There is no crop grown among us cultivated with more slovenliness. In general, little attention is paid to the selection of potatoes of the best kinds for eating; and to the selection of the best seed of the best kinds. They are taken indiscriminately from the heap; or oftentimes the most worthless, those which are too small to be eaten, are chosen for planting; and the different kinds are often intermixed in the same hill and field without any regard to the different times of ripening; and at harvest, some will be ripe and others not ripe, from not being seasonably planted; whereas, it is as desirable that a potatoe should be ripe, as that an apple should be ripe.

Experiments made in England some years since, are confirmatory of the comparative importance of the different parts of the seed as used for planting, which has been stated above. The British Farmer's Magazine says, "that it has been found that seeds from the top end of the potatoe yielded the largest and the earliest crops; that seeds from the middle portion gave two-thirds of the former, and that those from the smaller or root end, gave less than one-third of the first. It follows, that if only the root ends had been rejected, the whole crop would have been increased at least at the rate of seven to nine. In some parts of Ireland, where the culture of the potatoe is carefully studied, it is common to reject seeds from the root end."

It is stated likewise in Silliman's Journal, and in the British Farmer's Magazine, "that from experiments made in Holland, when potatoes are planted, the germs of which are developed, as happens occasionally in late operations, or in open mild winters, that the produce differs in quantity by more than a third, to what it would be if potatoes, which had not advanced, had been used; and further, that besides this diminished product, the quality is inferior."

All these circumstances go to prove that this crop admits of great improvement. In several districts in England, they have suffered for two or three years past from a most remarkable failure of their seed to germinate. Various animated and long discussions have been had in the agricultural periodicals and newspapers as to its cause; as yet, however, it remains undetermined; and considerable uneasiness and even alarm has been excited. Potatoes with us are subject to no serious diseases; but suffer mainly from the muck worm, whose ravages are sometimes considerable.

COOKING POTATOES.—This is no inconsiderable art; and I have some suspicion that Cobbett's ignorance of the best way of doing this may have been one reason of his antipathy to the use of this esculent. The direction given by one writer is, never to put your potatoes into cold but boiling water; and keep it boiling until the potatoes are done or sufficiently boiled; then pour off the water as soon as possible; if a little salt be thrown into the water when boiling, the better." We will add a better mode than this, which has been so thoroughly and successfully tested, that we believe it cannot fail to be approved: Select the potatoes you design for dinner the day previous; pare them and throw them into cold water and let them stand three or four hours; then, at a proper time before dinner, put them into boiling water; and when they have sufficiently boiled, turn off all the water, leave off the cover and hang them over the fire to dry. When the steam has passed off they will then be in the best possible condition for eating. By this mode, potatoes even of a watery and inferior quality, become mealy and good. H. C.

CHEAP MANURE.—"Raise a platform of earth on the headland of a field, eight feet wide, one foot high, and of any length according to the quantity wanted. On the first stratum of earth lay a thin stratum of lime fresh from the kiln; dissolve or slake this with salt brine from the nose of a watering pot; add immediately another layer of earth, then lime and brine as before; carrying it to any convenient height. In a week it should be turned over, carefully broken, and mixed, so that the mass may be thoroughly incorporated. This compost has been used in Ireland; has doubled the crop of potatoes and cabbage; and is said to be far superior to stable dung."

I have tried the above manure with some success; but not with success equal to the above statement. Something must depend on the kind of soil to which it is applied.

H. C.

We are truly obliged to the writer of the following communication, and our readers, certainly cannot be less so; as the facts therein given may be implicitly relied upon, and are of deep interest to every practical farmer. We take M. at his promise, and give him notice that we shall often draw upon him for the results of his experience, and trust that our drafts will not be "protested for non-acceptance." If *accepted* we ask no *endorser*.

It will afford us great pleasure to aid him in "*hammering*" out the *truth* of such vast importance, into the brain of every wool grower or sheep raiser in the country.—[EDS. N. Y. F.

MANAGEMENT OF SHEEP.

MESSRS EDITORS,—I have long since desired to contribute something useful to the columns of your valuable journal, which is

the privilege and duty of every subscriber. Many are doubtless deterred from so doing, by the same reason which has influenced myself, viz., because they have nothing novel to communicate. I have discovered that novelty is not always associated with utility, and therefore, after due reflection, I am convinced I cannot better subserve the purposes for which your journal was established, than in this communication, bear my testimony in favor of something already known, of the highest importance, and of undoubted advantage, in every point of view, to all who practice it. I refer to the housing and protection of sheep, during the winter. This a trite subject Messrs Editors, but it is one, which will bear more hammering than you are aware of; and if it were possible to hammer it into the brains of every wool grower, I should congratulate myself as one of the greatest benefactors of the age.

Much has been published on the improvement of the breed of sheep, the best modes of keeping &c., but I fear to very little purpose. I have sometimes thought, that our great freedom as a nation, had an unfavorable influence upon private character, and is in some degree injurious to individual improvement. Every man as soon as he slips "his leading strings" is proud of "going upon his own hook," this is frequently a sort of independance of thought and action, which is too apt to degenerate into self-sufficiency and conceit of our own superior knowledge. These remarks are particularly applicable in my opinion, to the great majority of farmers. Almost every man you meet with, in these days, is disposed to consider his own kind of stock best, his system of tilling best, and his every thing in regard to management better than his neighbors. All experience and observation prove, that when a man thinks he has arrived at the point of perfection, and he begins to retrograde. This spirit of of self-sufficiency is fatal to all improvement. The rapid strides which agriculture is making towards perfection, renders it ridiculous for any one to say "my system is best, I know enough already, and will follow in no man's track." In my opinion, we all ought to consider, that in this country, the great science of agriculture is yet in its infancy, and loudly applaud every experiment that is made to develope the wonderful, and still hidden, resources of our soil. I am not, however, myself disposed to bow to every theorist and innovator, whether in religion, politics, or farming, but where experiments are based on common sense, and conducive to profit, I am ready for one, to adopt them. How much valuable information and solid advice have been tendered through the medium of your journal, which, if followed, would have increased our gains some ten, some twenty, and some an hundred fold!! yet this spirit of self-sufficiency rejects the experience of others, and rests satisfied with pursuing the beaten track of our grandfathers.

These observations have been deduced, not only from my own experience but those around me. I will now proceed to give you briefly the manner of managing my flock of sheep.

Until within two years, I have committed the abominable sin of allowing my flocks to be fed during the winter, about stacks, without any protection from the pitiless storm, and when I look back on the years and years which I did so, and recall their sufferings and death from exposure, it is really with shame and confusion of face that I make it known. I have, however, put a stop to so inhuman a course and a cordingly set about building barns, in size 30 by 20 feet, 14 feet posts leaving an opening underneath, of 4½ feet from the ground. I have found the body of each building sufficiently large to contain hay enough, in an ordinary winter, for 100 sheep, and the accommodation or shed part ample for that number. All of them front the south with a passage way of some 8 or 10 feet wide, which is at all times open, and leaves them free to go in and out at pleasure. About the barns, which stand on my meadows, I have created board fences, made close, which, when feeding, afford great protection from winds; as regards the size of the yards, never having measured them, I am unable to say; but 60 by 100 feet is large enough. My hay is fed in boxes, with opening at the ends and sides, sufficiently wide for the admission of their heads. Some of your readers may smile when I inform them, that this is the first winter I have made use of boxes; this, however, it the fact, and such I have discovered in the saving of hay, that hereafter I shall 'veto' open racks, or scattering hay on snow or ground.

What is left in the boxes, every morning, is taken out, put in a pen until full, and then drawn away and fed to my cattle. Herein is great economy—the waste of feeding on the snow or ground, every practical farmer knows.

Raising a large crop of wheat yearly I am supplied with great abundance of straw, which is used partly for beds, and scattered about the yards—much of it, in cold weather, sheep will eat, and the residue is turned into manure. By the way, I think this a capital mode of disposing of straw, as it is soon cut up by being constantly trampled upon, and thereby converted into immediate use, without the delay of rotting.

From the beginning of winter to its conclusion, I feed daily to my last spring lambs, half a bushel of clean oats to the 100, a mixture of bran and oats I think preferable, however, inasmuch as in the beginning of winter, oats alone is rather too stimulating and will occasion some to scour—the bran effectually counteracts it. Where bran cannot be obtained, feeding half the above quantity of oats, for the time of two or three weeks will answer.

I will here remark, that I have uniformly realized the greatest advantage in graining my lambs. Out of nearly 500, up to this time (middle of March) I have not lost one. It must be obvious to all, that with a view to promote growth and a good constitution, with any description of stock, feeding when young, and keeping up good condition, is of the highest importance.

To my full grown sheep, I have, until this winter, fed the same quantity of grain to the hundred, that I do to my lambs. They now look as well as when they were grained—but, it is almost solely to be ascribed to the protection which has been afforded them. It is my practice to give hay tiwce a day to all my sheep in ordinary weather, and when very cold, three times. So much for reference to my winter economy.

I am a firm believer in the good old maxim, "that stock well summered are half wintered," and to this end, my farm is divided into fields of from eight to fifteen acres each. I allow a flock to remain but a few days on a field, when they are changed to another. By so doing, the grass is not eaten too short, readily grows again, and the effects of fresh pasture so frequent during the summer, your readers can easily conceive.

As my object in this communication was to make known, in some degree, my own mode of management of sheep, but more particularly to add my testimony of the benefits to be derived from housing sheep during the winter, I will state some facts, which will lend additional weight.

Until the erection of my barns, it has been my misfortune to lose from 50 to 150 sheep every winter for the last eight or ten, notwithstanding the advantages of feeding oats and bran. The severity of last winter, all will readily remember; yet in consequence of the protection my sheep enjoyed, my loss was only 38 out of nearly 1600. My loss during this winter up to this period (as above stated) is only 6; my whole number of sheep at present is about 1800.

I will now record the loss of some of my neighbors, during the last winter, in the adjoining Co., (Cayuga,) none of whom had barns, sheds, or hovels provided for their flocks. One individual out of a flock of 1400, lost between 600 and 700—another, out 2000, lost nearly 400—another, from a

flock of 1500, lost between 200 and 300, and the loss was nearly in the same proportion, with few exceptions, throughout this region!!

These are startling facts, and would seem not to require a word of comment. Will not humanity almost blush? That men will so utterly disregard their own interest is truly astonishing! They will make all needful arrangement for their horses and cattle, and get so absolutely neglectful of the comfort and benefit of that, to me, most interesting of all domestic animals—sheep. Every one would naturally suppose that the above, who sustained such losses, would arouse themselves and prevent the recurrence of such devastations, by providing some sort of shelters—but no—to my certain knowledge not one of them have raised a finger to do it.

Will not my preparatory remarks apply to these and all others who do likewise? I called it self-sufficiency—it is more—it is downright inhumanity: a treatment they are not guilty, even to their dogs. But I shall leave your humane readers to apply the lash. But one word more—these are the very kind of farmers, referred to, who regret all experiments, all experience of others—who have arrived at the goal of perfection—they will tell you "*that housing of sheep is injurious to their constitutions*"—that they *know* their system of management is better than their neighbors. Have I not, Mr. Editors, proved conclusively that when men think—nay more—*know* they have arrived at the point of perfection; that moment they retrograde. "The beginning of wisdom is to know our own folly."

M.

Lansing, Tompkins Co., N. Y.

HAY FROM SCOTLAND.

An English paper says—"It forms a curious item of the agricultural commerce of this country, that we are now exporting hay to America. A vessel is about to sail with a cargo of 10,000 stone of hay from Aberdeen, and a larger will follow from Clyde. The hay is pressed by the hydraulic press, and the bulk has been thus reduced [sufficiently] for transportation."

The hay thus spoken of has reached this country and finds a quick sale at from 22 to 25 dollars a ton, principally at Boston. If Great Britain, with nearly three times as many horses, cattle and sheep, in proportion to its population, as are owned in the United States, is not only able to provide for their wants, but furnish large supplies of hay for exportation, it proves that England is far ahead of us in productive farming, and that we ought to mend our agriculture at once. It is the *cultivation of roots*, that enables English farmers to keep so many cattle, and spare us their surplus hay; and American farmers must follow the example, or fail of their profits and success. It is surprising with what tenacity our farmers cling to old usages; and persist in mowing ten acres of land to get fifteen or twenty tops of hay, when two acres of roots will furnish more and far superior food. There is hardly a crop produced, more certain than the ruta baga, unless attempted on soils decidedly unfavorable, and their excellence has been fully tested for feeding and fattening cattle and sheep; yet not one half our farmers can be induced to attempt the culture of the root. It is satisfactory to know, however, that the root culture is gaining ground.

SKINLESS OATS.

Extract of a letter to the Editor of the Genesee Farmer at Drummondville, U. C.:—I am glad to have the opportunity of requesting you to call upon such of your subscribers as have cultivated the skinless oats, since 1834, to communicate through your publication what has been the result. In the Genesee Farmer for July and October, 1834, very encouraging accounts are given of the culture of this grain; but I regret to state that my experience has not been so favorable. I sowed last spring upon about a quarter of an acre, seed which had been carefully picked by hand, and in which, consequently, there was no mixture. The growth was vigorous, and as stated by Mr Thorp, (Oct.) the oats ripened earlier than the common oat; but on thrashing, the return was not above half a bushel; though the land had been well manured the preceding spring for corn and potatoes, and the rest of the field yielded at the rate of 34 bushels per acre of barley, of the first quality produced in this neighborhood.

"I have seen somewhere in the Genesee Farmer, a statement of one thousand bushels [of what?*] produced from one acre. Is this well authenticated? Few people will believe it. I had, in 1835, a produce of 300 bushels per acre; last year only 200, under the same favorable circumstances as to manure and cultivation."

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* If the writer alludes to Ruta Baga, we have no doubt but 1000 bushels, and more, have been raised on an acre.

From Loudon's Gardener's Magazine.

VITALITY OF SEEDS.

It will be in the recollection of our readers, that, in October, 1834, we published some interesting details of the opening of a British tumulus, near Maiden Castle, by Mr. Maclean, who found therein a human skeleton, and a portion of the contents of the stomach, containing a mass of small seeds, which neither the operation of the gastric juices, nor the lapse of probably twenty centuries, had sufficed to destroy. Many of these seeds have been subjected to various careful experiments, to ascertain whether the vital principle was extinct; and we have the satisfaction of announcing that Professor Lindley has happily succeeded in producing plants from several of these seeds. These plants have confirmed the opinion expressed by the learned professor, on a first inspection of the seeds, that they were those of the rubus idæus, the common raspberry. The plants are now very vigorous, have produced much fine fruit this season, and form an object of the greatest curiosity and attraction to horticulturists. This highly interesting circumstance proves the raspberry to be an indigenous plant in this country, growing at a very early period, and then constituting an article of food. (*Dorset Chronicle*, as quoted in the *Bath Journal*, of Sept. 12, 1836.) We have seen the raspberry plant alluded to in the Horticultural Society's garden The facts are extremely interesting; and we hope Dr. Lindley will compare this case with others of the kind upon record and favor the world with a memoir on the subject.

From the New-England Farmer.

THIRD ANNUAL REPORT OF THE MANAGERS OF THE BOSTON ASYLUM AND FARM SCHOOL.

The managers of the above institution respectfully submit to the corporation the following report:—

The present board of managers was elected in the month of June last, and this report commences with that period.

The objects of the institution are presumed to be well understood. To rescue from the ills and the temptations of poverty and neglect, those who have been left without a parent's care; to reclaim from moral exposure those who are treading the paths of danger; to "place the solitary in families;" to give to those who know nothing of the ties or influence of home, some taste and fondness for a local habitation, at the least; and to offer to those, whose only training would otherwise have been in the walks of vice, if not of crime, the greatest blessing which New-England can bestow upon her most favored sons, a good education, are some of the purposes for which the Asylum and Farm School was endowed. Under the blessing of God, success has thus far attended the exertions which have been made to accomplish these objects. From the monthly reports of the superintendent, and from the personal examination of the establishment on Thompson's Island, the board of managers are satisfied that there has been much improvement in the character of the boys who have been committed to the charge of the institution. In the last report of the superintendent, 62 boys are placed in the highest or first grade, 40 in the second, 4 in the third, and 1 in the fourth.

The number of boys on the island at the time of the last report, was 92; since that time 18 boys have been admitted, and three withdrawn. The number on the 1st of January, 1837, was 107; all of whom, as well as all other persons connected with the establishment on the island, were in good health, and there has been no death at the institution since the last report was made. The occupations and employment of the boys vary with the season. In spring, summer and autumn, the larger

boys, in classes, work upon the garden and farm, of whose labor they perform a large part The younger boys have small gardens of their own, which afford them recreation when released from school. In the winter season most of them attend school, where they are instructed in the learning usually taught in our common schools, and some of them assist in making clothes and mending shoes. The winter evenings are occupied with the study of geography, and the use of globes; botany, and practical agriculture; lecturing on different subjects, singing and reading.—The superintendent states that "every boy in the institution is required to be present during the evening exercises, if he is able, which are very pleasing to them, and which we all enjoy very much."

A large number of mulberry trees have been planted upon the island, and there are many silk worms at the establishment. It is contemplated to improve the advantages of the location in the production of raw silk for manufacture.

As to the success of the boys in the farming operations, Capt. Chandler, the superintendent, says, "they have succeeded far beyond my expectations; I think they have done more work, and done it better, than the boys of their age who have been regularly brought up to the business in the country generally do." And as to the comfort and contentedness of the boys, he says, "they are all comfortably clad with woollen clothes, shoes, stockings and caps, and appear to be as happy in their present situation as boys generally are under the paternal roof. They appreciate their advantages, and most of them are grateful to the benefactors of the institution and their friends for placing them here. The boys are well supplied with books, and keep them in excellent order; our library contains between 4 and 500 volumns of well selected books I have also an agricultural library containing about 30 volumns, to which the boys have access."

Opportunities are occasionally offered to the friends of the boys at the institution, of visiting them on the island in the summer months.

The school is under the immediate charge of Mr. George B. Hyde, and he as well as the superintendent and all engaged in the establishment, are believed to merit the continuance of the confidence which has hitherto been reposed in them.

During the past summer, several parties of ladies and gentlemen, at the request of the board of managers, visited Thompson's Island. At these visits there have been many persons present, and an examination of the boys in their different studies has been accompanied by some remarks on the objects and prospects of the institution.—Among these who have thus visited the island, have been many strangers, who have always expressed their interest and pleasure in its objects and condition.

And how should it be otherwise than an object of interest; an institution designed to rescue the destitute orphan boys of our city from vice and ruin; to withdraw them from scenes and associates, whose contaminating influence would quickly destroy the perceptions of conscience, and leave them, deprived of that monitor, to pursue the impulses of passions which inevitably destroy their victims. Many are the worthy objects of the charitable institutions among us; our hospitals relieve the sufferings of the sick, and restore them to health and usefulness; they are a blessing which may be required by all of us, and we would not detract from their deserts. But we conceive that an institution which is to rescue immortal beings from the stain of sin, which could hardly otherwise be avoided, which is intended to have an influence on the youthful mind, and lead it to an understanding of its own capacities, responsibilities and hopes, deserves the fostering care of an enlightened, benevolent community, as much as those associations whose aim is to cure the diseases of the body, or to restore the wanderings of intellect. Such an institution as the Asylum and Farm School, is in true accordance with the spirit of the pilgrims; it carries into effect the first objects of their solicitude, the education of the young—of that young whose talents would otherwise be employed to violate the peace and virtue of society.

It will be seen by the report of the finance committee, that the expenses of the institution for the year ending January 1, 1837, have amounted to $6,100, while the receipts for the same time have amounted to 3,500, leaving a deficiency of $2,600. To meet this excess of expenditure over income, and to prevent its recurrence, it will be necessary to appeal to the liberality of the public. The board of managers had intended to have made that appeal in the autumn of the past year; but the condition of the financial affairs of this community induced them to defer it. They would recommend the subject to their successors as one requiring their attention when a suitable time shall have arrived for its execution, with the confidence that the appeal will be cheerfully and promptly answered.

For the managers.

WILLIAM GRAY.

From the New-England Farmer.

FARMERS' WORK.

EWES AND LAMBS.—It is incumbent on every good husbandman and faithful shepherd, to feed his Ewes plentifully for a few weeks before, and for a considerable time after they produce their lambs. Good farmers have told us that they have found it very beneficial to give to each of their ewes about one half a gill of Indian corn a day, for 5 or 6 weeks before they have yeaned, and while suckling, to give them good roots, or some other juicy food. The want of milk in the ewes, is the most general cause of death in the lambs. Keep the mothers well, and their offspring will thrive and be strong.

The *Farmer's Manual* says, "If you have stored more turnips than are sufficient for the use of the table, give them to any stock that will eat them, except your sheep; give to them potatoes, but not turnips at this season, for turnips will injure the lambs."

Weak lambs should be treated in all respects as if they had been drowned, and you was endeavoring to restore them to life. Apply gentle and regular warmth; give them warm milk, frequently, in small quantities, (the milk of the sheep is best,) and if the ewe has milk sufficient for the support of the lamb, you may generally raise it, otherwise the lamb usually dies. It requires more care and labor to nurse one feeble lamb, when its dam yields too little milk for its support than it would for an hundred, if they were healthy and well kept.

If your sheep, whether store sheep or ewes with lamb, have good hay, about a quart of potatoes a day, to each, will it is said be very beneficial, and an ample allowance. But when the object is to fatten them, (says a writer in Rees' Cyclopedia,) about a gallon of potatoes a day, with a little hay will be the proper quantity; but this is dependent in part on the size of the animals, and in part on the quality and quantity of the hay, which is allowed them. Potatoes, besides their use as food for sheep, are said to be very serviceable to those auimals as an article of diet, which usually supersedes the necessity of *medicine*. They have, when given raw, an opening or purgative quality, which is thought to be of use, and to answer a similar purpose with sheep which is effected with swine by brimstone and antimony.

Care should be taken to place in the stable, small tubs or troughs of water for the sheep to drink in. They will do very well in summer without water, as they feed when the dew is on, but they need water in winter, especially if fed mostly on dry food. Deane's N. E. Farmer states that "when sheep have colds and discharge mucus from the nose, good feeding, together with pine boughs given occasionally, will cure them; or tar spread on a board over which a little fine salt is strewed, will induce the sheep to lick up tar, and this will cure a cold."

The *Yankee Farmer*, in giving directions for raising lambs, observes that "great care should be taken when lambs are born, for it is frequently the case that their fore teeth are not cut, which makes it very difficult for them to hold the teat, so as to suck when young and weak, and it is common for lambs to get discouraged, though ever so rugged at first. To remedy this evil rub the thumb nail, or any hard substance, over the gums, sufficiently hard to cause the teeth to cut through, and the lambs will then be able to suck without any difficulty."

Clay has been recommended as useful for restoring and preserving health to sheep. A writer in the New-York Farmer gives the following remarks on this subject:—"I am told on credible authority, that a gentleman, who was losing his sheep without apparent cause, had occasion to use some clay about his house in the winter, and observed that his sickly flock ate it with avidity; he caused a load to be placed in their yard, much of which was devoured, and his sheep speedily recovered.

"As a cure, therefore, I would recommend clay to be placed in the sheep yard, which can, at worst do no harm, as the animals will not eat it, unless prompted by instinct."

From the New-England Farmer.

CALVES.—The following mode of rearing Calves, adopted by the Society, denom-

inated Shakers, in Canterbury, N. H., was communicated in a letter from Francis Winkley, to Levi Bartlett, of Warren, N. H., and was published in the N. E. Farmer, in 1824; but such have been the changes since that period, in our subscription list that it would probably be new to many of our readers.

"We let calves that come in the fore part of March, suck a week or ten days, then take them from the cow, giving them a moderate allowance of new milk to drink till they have learned to drink it freely; then put in some skimmed milk; and we feed them wholly with skimmed milk, taking care to give it at about the temperature of milk taken directly from the cow, by heating a part of it and mixing it with the rest. Care should be taken not to scald the milk, when heated; also, not to give them any sour milk, for this will make them scour. The trough or vessel in which they drink their milk, should likewise be kept clean, and not suffered to become sour. We let the milk stand about twelve hours before it is skimmed; giving a calf at first about four quarts, night and morning; increasing the mess as need requires, till he is six weeks old, from which time till ten weeks old, he will require, perhaps about 12 quarts per day.

"When about ten weeks old, we begin to diminish the quantity of milk for about the space of two or three weeks, at which time we wean them. During the whole process, from two to fourteen weeks of age, calves should be well supplied with good hay, salt and provender, such as oats, wheat, bran and oil cake, ground fine.

"The particular advantages to be derived from the above method of treatment are the following:

"1. It is much cheaper than to let them suck in the ordinary way; whereas it makes a great saving of cream for butter, and that without injuring the calves, if they are properly attended to.

"2. It prevents calves from moaning or pining, so much while weaning as they would otherwise do, when taken from the cows.

"3. It not only prevents the cows being injured in consequence of the calves biting the teats, but also prevents their holding back the milk from the milker, which often serves to diminish the quantity of milk afterwards.

"4. The only disadvantage to be found in the above method of treatment is, that it requires some more labor to feed them, where they thrive equally well in every respect as those do which are permitted to suck in the ordinary way.

MANUAL LABOR SCHOOLS AND COLLEGES. We are so satisfied of the importance of these American innovations upon the old worn-out system of education in Europe, and of their congeniality with the spirit of our republican institutions, that we take great pleasure in urging upon the community the necessity of engrafting them deeply into the structure of all our schools and colleges—public or private. As an example of their great utility we refer to an oration recently delivered by a pupil of the Manual Labor High School of Elyria, Ohio, as inserted in the Advertiser of that place. The vigor of thought shown in this document, is itself a proof of the invigorating influence of wholesome manual labor in useful arts conjointly with the exercise of the mind, on more speculative and abstruse studies.—Many of the students, we learn, of this school entirely support themselves by their manual labor. The orator, referring to the olden systems, says truly:

"They are destructive to human life; though they cultivate the tree of science, they sow the seeds of death. Now what is to be done? Shall the cause of education be abandoned? Shall the world fall back into barbarism? Or shall science continue to be watered with human blood, and college bowers become the graves of the students?"

Again:

"Does manual labor have a good effect upon the body? Evidently it does; it enlivens the circulation of the blood, strengthens the digestive powers, and keeps in healthful action the whole system; and the most serious effects often result from confinement; the limbs become weak, the operations of the system sluggish, the whole body debilitated, and some fatal disease soon follows. Now, if it has these effects upon the body, it must have a very strong effect upon the mind, by means of the sympathy which exists between the two,—so that, when the body is diseased, the mind is incapable of discharging its functions. Can a fine lady pursue the business of a milliner in a house daubed with filth and covered with cobwebs? just as possible for the mind to pursue its employment in a body made sluggish by inaction and tainted with disease. Another great benefit arising from the manual labor system, is, the pecuniary aid it renders to the student; and, indeed, without this aid, the benefits of education would be denied to a great part of community."

[Our common schools afford abundant education gratuitously, but they do not give food and raiment.]

"Some oppose this system no doubt, for the very reason which makes the republican and the philanthropist love it; because it unlocks the temple of science, throws open the iron gates, and bids the indigent youth enter and eat of the banquet hitherto provided only for the rich."—[Sunday Morning News.]

From the Springfield Journal.

BOSTON PIGGERY.—About six miles from the city, in West Cambridge, is the Boston Piggery. At least for 700 hogs are here constantly kept in pork condition, *entirely* on the offal from the dwelling houses in Boston, every one of which is visited in turn by the city carts. The offal increases, and the contractor calculates that it will be sufficient hereafter to fatten 1,000 hogs. He now receives four cart loads a day, and pays the city $3,500 a year, or about $2,75 a load. He receives three dollars a day for what the hogs leave. The city Treasury loses $1000 a year by the operation, and it is said the man makes three times that sum. The pig pen is an enclosure of fifteen acres, with places of shelter from the storm. As the hogs attain their size, they are slaughtered on the spot—the fat barrelled up, and the lean sold in the city. According to the rule in the country, the contractor should furnish each family in the city once, a year with a spare-rib, for the food furnished the piggery.

From the Poughkeepsie Telegraph.

Mr. Cornelius Husted, of Pine Plains, in this county, fattened this fall, a "lady pig" and eleven "blooming responsibilities," the weight of which was twenty-four hundred and thirty-seven pounds.

DUCTHESS OUTDONE BY TOMPKINS.

We are authorised to state, that Mr. C. H. Morrell, of Lansing, has fattened a sow and her litter of twelve pigs, the aggregate weight of which, in a dressed condition, was 3,550 pounds. The pigs were 9 months and 10 days old.

This is the largest product from a single family, of the age, which we have any account of.—[Ithaca Chronicle.]

From the Silk Culturist.

THE NATIVE, OR COMMON RED MULBERRY AS FOOD FOR SILK WORMS.

Lancaster, Ohio, Dec. 7th, 1836.

F. G. Comstock, Esq.

Sir:—Having learned from the "Culturist" and other authorities, that seven or eight pounds of cocoons are usually required to produce a pound of reeled silk, I can hardly hope to be credited when I state the result of an experiment or two that I lately made with a few cocoons of worms that were fed on leaves of the *morus rubra*,* or common red mulberry of our western forests.

The cocoons were deprived of their loose floss, and the crysalids were perfectly dry. I weighed cocoons to the amount of 215 grains, and causing them to be reeled I obtained 75 grains of silk, equivalent, very nearly to 35 per cent. Observing that several grains were lost through unskilful management, the reeler being altogether inexperienced in the business, I determined to repeat the experiment, in order to ascertain, if possible, the maximum of silk that could be reeled from a given quantity of cocoons. I then carefully weighed just 100 grains of the cocoons, which yielded 39 grains of reeled silk, besides a few atoms of floss amounting perhaps to one grain. It would thus appear that these cocoons contained about 40 per cent. of silk. What is the per centum of silk usually contained in dry cocoons? and what proportion of the silk contained by the cocoons is extracted in the ordinary process of reeling?

In determining the value of the red mulberry, as a source of food for the silk worm, we should inquire—

1st. What is the quality of the silk it produces?

2nd. Is the red American mulberry, a tree of as rapid growth as the white Italian, with which we would naturally compare it?

3rdly. Does the former produce as abundant a foliage as the latter?

4th. Is the foliage of the American tree as nutritious as that of the Italian—and do worms fed upon the former produce as good cocoons as those fed upon the latter?

1. With regard to the quality of the silk obtained in my experiments, I do not profess to be a competent judge; but I certainly cannot conceive that any thing of the silk kind could excel it in fineness and brilliancy. My judgment, however, is not needed to establish the character of the silk produced from the American mulberry.—We are already in possession of an overwhelming mass of evidence tending to prove most decisively, that this silk will bear comparison with the *best* that can be produced from any other source. Your readers may find some of this evidence in articles on the 92d, 94th, 96th, 105th, 109th, 138th, 155th and 156th pages of the "Silk Culturist," and also in a document published by Congress in 1828, and containing "information in relation to the growth and manufacture of silk."

In addition to these testimonials, I would present the evidence of Mr. D'Homergue, a French silk manufacturer, who pronounced a sample of reeled silk which had been produced from the red mulberry to be "indeed beautiful"—"not surpassed by any that he had ever seen," and "equal in firmness to any other."

I could also demonstrate by citing several authorities, that sewing silk produced from our native mulberry is *stronger* than the European article.

2. With regard to the second query I would premise that it is hardly fair to compare a plant in a state of nature with one that has enjoyed the advantages of cultivation. Notwithstanding, however, the disadvantage that exists on the side of the American mulberry, it has the appearance of being the more thrifty tree, if I might be permitted to judge from a few specimens that I have seen of the Italian tree.

3. If there is any difference in regard to the quantity of foliage yielded by each, I believe that the difference is in favor of the American tree. At least it is certain that the red mulberry has the important advantage of producing a much larger leaf than the other.

4. That the leaves of the American mulberry are as nutritious as those of the Italian, and that a given quantity of the former will produce as much silk as the same quantity of the latter, there can be no doubt. And all observers concur in remarking that the cocoons produced from each are equally fine. Mr. Jesse Waltz of this place informed me that he and his neighbor, Gen. P. Beecher, each fed a few silk worms in the same season, Mr. Waltz using the common wild mulberry, while Gen. Beecher used the Italian; and that upon comparing the cocoons, there was not the least perceptible difference. The cocoons were reeled, and upon a second comparison no difference in the quality of the silk could be discovered.

I would now inquire, why in the name of common sense, persons in the west who wish to engage in the silk culture should wait on the tardy growth of the Italian mulberry from the seed, when the forests every where around them abound with a tree altogether equal, if not superior to it. In almost every neighborhood a considerable cocoonery might be profitably supplied from trees planted by the hand of nature. But as these trees are generally somewhat dispersed, and as the climbing of large trees is inconvenient, I would recommend the plan of propagating the red mulberry by means of cuttings set hedgewise. By stocking the requisite quantity of ground with thrifty cuttings, a person might, on the second year, have any amount of foliage that he might desire.

One of your correspondents estimates that an acre of ground set with cuttings of the Chinese mulberry will on the first year yield 10,000 pounds of leaves. It is allowed by some writers that 100 pounds of foliage will produce one pound of silk. If this supposition is correct, then the produce of one acre on the first year would be 100 pounds of silk, worth, when reeled, $500. I feel confident that on the second year a result equal to this might be obtained from our native mulberry. I am not sure that the foliage might not be profitably used even on the first year.

Permit me to suggest a theory in regard to the Chinese mulberry. I am persuaded that it is a creature of cultivation. It is propagated altogether by layers and cuttings, instead of seed; and the stems are cut down every year to the ground in order to obtain an annual crop of fresh shoots.—It is to these circumstances of its propagation and culture that the luxuriance of its growth, and the largeness and tenderness of its leaves, are owing. Hence will appear the reason why a similar plant is not obtained when attempts are made to propagate it from the seed. The plant obtained from the seed is a *natural* production; while that produced by other means is an artificial one. I believe that I can originate a new kind of *morus multicaulis* quite as good as the old, from the red mulberry. I design to make the experiment next summer. For a commencement, I can obtain from trees from which some of the larger branches had been accidentally broken off, a considerable number of shoots five and a half feet in length, the growth of last summer—and I can also get a few sprouts of a similar growth and age with the roots attached.

Yours respectfully,
JOHN WILLIAMS.

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* This is the true botanical appellation. Some have improperly called it *Morus nigra*, or black mulberry. The black mulberry is not a native of North America.

CULTIVATION OF THE PRAIRIES.—The following letters from, and to, the Hon. H. L. Ellsworth, superintendant of the Patent Office at Washington city, give a better idea of the cost of cultivating the Western Prairies than we have before seen, and we think our readers generally will be pleased with a perusal of them.

WASHINGTON, Jan. 1, 1837.

Dear Sir—You doubtless expect some further statement than has been received respecting the investment made for you in the valley of the Wabash. A desire to meet my son, who was daily expected from Lafayette, has delayed my writing until this time. And now, let me say, generally, that the west has grown, and will continue to increase beyond the most sanguine calculations. Nor will any action of general government materially check the advancement of the lands which are judiciously located on the great western canals or railroads. Very little is yet known of the valley of the Wabash. Although the fertility of the soil is unequalled, still few have ever seen this country. The reason is obvious, there is no communication with it, and hence speculators and settlers have passed around it going west, either by the Michigan Lake, or by the Ohio and Mississippi rivers.

Five thousand persons left Buffalo in one day to go up the lake, and yet not one went into the valley of the Wabash. A slight inspection of the maps of Indiana, Ohio, and Illinois, will show a direct route to the Mississippi from the west end of Lake Erie, to be up the Maumee and down the Wabash valley to Lafayette. It may, therefore, be considered certain that when the railroad from St. Louis to Lafayette is completed, the great travel from the Mississippi valley to the east, will be by the lakes through the Wabash and Erie Canal the shortest and quickest route by several days. A person at the mouth of the Ohio will pass up to St. Louis, then take the railroad and canal to Lake Erie, in preference to following the meanders of the Ohio river in a steamboat. Can there be a doubt on this subject? What time will be occupied on this route to New-York? Not exceeding six days. From St. Louis to Lafayette, (240 miles,) one day may be allowed; from Lafayette to the lake, at the rate of 4½ to 5 miles per hour on the canal, (now in operation considerable part of the way,) forty-eight hours; on the lake, 24 hours; and from the lake to New-York city, via railroad, (now commenced,) not exceeding two days.

What changes this must make in the value of property on the route! The value of land depends on the fertility of the soil and the facility of transportation. From a personal inspection of the western States, during six years past, I am fully convinced the Wabash valley has the best soil and most favorable climate. In the latitude of Philadelphia, you avoid the extreme of great heat in summer and of cold in winter, and also avoid the danger of early frosts, so prevalent in a higher latitude. You may ask, what will be the markets for Indiana? I answer, New-York and New-Orleans.—The former by the Erie Canal, and the latter by the Wabash river, (navigable to Lafayette for steamboats,) and by the railroad above named to St. Louis, also Montreal by the Welland Canal. A choice of all these markets, equally accessible, is presented to farmers on the Wabash valley; and one peculiar advantage this valley possesses

over Michigan and Wisconsin, is the early navigation of the Wabash river. The produce of this valley can by this river pass down to New-Orleans in flat boats, free of tolls, and be transported to Charleston, Baltimore, New-York, and Boston, six weeks before the New-York canal opens. This early market may be estimated at a good profit in business.

You may ask, if the Wabash and Erie Canals will surely be completed? Undoubtedly they will. Indiana and Ohio are pledged to complete them. Nearly all is now under contract, and government has given lands adjoining sufficient to finish the same, *without any expense to the States.*

As like causes (other things being equal) produce like effects, it will not tax your credulity to believe, that the rich lands of the Wabash valley will equal those on the Ohio, New-York, and Pennsylvania canals which vary from $25 to $60 per acre. Is it possible that lands, yielding forty bushels of wheat, seventy bushels of corn, sixty bushels of oats, and four hundred and fifty bushels of potatoes, and distant only ten to twelve days transportation from New-York or New-Orleans cities, can be less than $30 per acre?

In making selections, I have, when practicable, procured both prairie and timber, though I am sure there has been a common error to pass the rich prairie because timber cannot be found adjoining, at government price. Under this belief many settlers have, to their sorrow, entered the timber and left the prairie, because they suppose nobody would enter that without possessing the timber. This prairie has been lately entered. And such is the facility of raising timber on prairies by sowing the seed of black walnut and locust, that the desire for timber land has diminished.—Those who doubt the comparative value of prairie and timber land., will do well to consider that $12 is a fair price for clearing timber land. Timber land when cleared in the usual manner, is left incumbered with stumps and roots, fatal obstacles to labor-saving machines. $12,000 will be required to clear 1,000 acres of timber land; whereas the 1,000 acres of prairie can be put into tame grass, without ploughing.

A prairie farm may be put in complete cultivation, at from $3 75 to $9 per acre, according to the annexed computations from my son Edward, who has been extensively engaged in cultivating the prairie for the last year. The annexed letter from Mr. Newell will also give much valuable information on this point. From a personal examination of the lands in France and on the Wabash valley, I feel no hesitation in pronouncing the latter decidedly the best for the beet sugar manufacture.—In France, eight, ten, and twelve dollars per acre are paid for rent, and yet great profits are made. An acre of good land will yield 44,000 pounds of sugar beet, from which 2,400 pounds of sugar can be extracted, which at ten cents per pound, amounts to $240 per acre.

In England, paper is now made from the residuum of beets, after the saccharine matter is extracted. An application for a similar patent is now pending in the patent office. The sample of paper exhibited is very good, and the rapidity with which the paper is made, must materially reduce the price of this article. Many labor-saving machines are introduced to aid in the cultivation of new lands. In a few years, it is probable that ploughing on smooth lands may be effected by steam; and even now mowing and reaping are successfully done by horse-power.

Such are the profits of cultivation, that I would advise all who can, to improve some part of their lands. A small improvement will repay expenditures, and greatly enhance the value of the whole investment.

Three benefits may be expected:

1st. The crops will repay expenses, and yield great profit.

2d. The land cultivated, and the land adjoining, will be advanced several hundred per cent.

3d. If stock is put on the farm, the same may be numerically increased, and greatly enhanced in value, by improving the breed.

Either of these considerations is sufficient to justify cultivation, and guaranty a large return. I might mention the successful cultivation of hay in the west—from one and a half to two tons is a fair crop.—This can be cut and pressed without any labor-saving machines, for $2 per ton; and if the grass was cut by horse-power, the expense would be still less. The profits on one hundred heifers, at $5, might be easily supposed. Fifty breeding sows would probably give seven hundred pigs per annum; and by these means a large farm could be stocked, with little capital advanced.

Hay at New-Orleans varies from $20 to $50 per ton. An average, for the last three years, may be $30 The cost of floating down hay in flat boats, to New-Orleans, may be $8 per ton.

If, therefore, fifteen hundred to two thousand tons of hay could be cut on one thousand acres, would it not be a profitable crop?

There is a practice mentioned by Mr. Newell, and highly recommended by others of putting in hay seed without ploughing the ground. This is done by burning the prairie grass in the spring, and harrowing in the seed. The seed catches quick, and grows well. Blue grass, especially, succeeds, in this way, and the grass will sustain stock all winter without cutting any hay or fodder for them. A large drove of horses were kept last winter at Indianapolis on blue grass, on the open fields, at the small expense of $1 per head per month.

From personal examination, I am convinced that ditching and hedging, as practised in Holland, England, and France, almost entirely, and now successfully adopted in Illinois, is cheaper than fencing by rails.

The general complaint of the earth crumbling by frost, is prevented by sowing blue grass seed on the sides. Mulberry trees might be raised on the slope of the ditch, with great profit. Indeed, such is the rapid growth of the mulberry in these rich prairie lands, that the purchase of this land at $1 25 an acre, and planted with these trees alone, would in a few years be highly valuable. Such is the extent of the prairie, that wood land will always be valuable for timber. The wood land is also rich, and fine for cultivation; and if trees under certain diameter are cut, a fine grazing farm may be easily made, and the good timber preserved. Similar pastures are found in Kentucky; these yield $3 profit per acre, annually. It may be asked, how can non-residents best cultivate their lands? I would remark, that it is customary to rent land (once broke and fenced) for one third of the crops delivered in the crib or barn. At this rent the tenant finds all.

I would advise to employ smart enterprising young men from the New-England States, to take the farm on shares. If the landlord should find a house, team, cart, and plough, and add some stock, he might then require one half the profits of the same. I would advise to allow, for fencing or ditching, a certain sum, and stipulate that the capital invested should be returned before profits were divided. A farmer could in this way earn for himself from $700 to $1,000 per annum, on a lease for five years.

The second year a mowing machine might be furnished, if one hundred acres were seeded down to tame grass. Mast for swine is found in great abundance, and the number of hogs could be easily increased to one thousand, by adding to the number of breeding sows.

Corn is easily raised, that it is found advantageous to turn the hogs into a field of this grain, without gathering it. It has long been the practice in the State of New-York, to raise oats and peas together, and turn in the swine to harvest the same when ripe. Experiments this summer in Connecticut, show a great profit in raising spring wheat and oats together, and feeding out the same to hogs. I have omitted to say, that good bituminous coal is found in the valley of the Wabash. The veins are from five to ten feet thick, and a large wagon load will supply one fire for a year. *Salt* also is manufactured in large quantities, and superior in quality to the Kenhawa salt.

Farmers in Illinois and Indiana are now successfully enclosing their lands by ditching, which has cost from fifty to seventy-five cents per rod.

The laws of the States of Indiana and Illinois, compel the owners of lands adjoining to pay one half of fencing, whenever they make use of, or derive any benefits from the fences of their neighbor. This lessens the expense of fencing one half.

If it be asked, what are the profits of cultivation? I answer, if the land is rented for five years, the profits accruing during this period, will repay the capital advanced in the commencement, with twenty-five per cent. interest per annum, and leave the farm worth $20 per acre at the expiration of the lease. Probably the profit will be much greater.

Yours, respectfully,
H. L. Ellsworth.

Lafayette, Nov. 1836.

Dear Sir—In consequence of the nume-

rous inquiries by yourself, and others, relative to the improvement of wild lands, and especially prairies; the cost of cultivation; the quantity of crops; the market for the same, and the profits that may be expected, I have concluded to write you a general letter, to be used as might be thought proper. My knowledge is founded upon experience, having just completed a farm of eight hundred acres on the wild prairies.

The expense of breaking up the sod, is $2 25. This is a fixed price, and certain calculations may be made on it, wherever the land may be located. But a difference will exist in the cost of fencing, according to the distance the rails are carted. For the farm I have just fenced, the rails were hauled four miles. This distance will form the basis of my calculations. It is apparent that the cost of fencing will depend materially on the size and form of the area to be enclosed. An area of three hundred and twenty acres will cost much more than half of the amount required to fence six hundred and forty acres. The four sides of a half section are three miles; the two longest sides being one mile each, and the two shortest a half mile each. The four sides of a whole section, six hundred and forty acres, are four miles, requiring only *one quarter more fence* for *double* the quantity of land.

Twenty rails are allowed to a rod; this makes a "Virginia," or worm fence, eight rails high—the eighth rail (called a rider) being elevated twelve or eighteen inches from the seventh rail, and resting on crotches, (eight feet long,) crossing at each corner of the "worm." Rails of ordinary size, laid in this manner, make a durable and tight fence, over and through which no cattle or stock can pass.

First Estimate for improving six hundred and forty Acres.

Four miles, or 1,280 rods, 20 rails to the rod, gives 25,600 rails.	
Add for enclosures, cribs, &c. 1,400 rails; total of rails is 27,000, which, at $3 50 per thousand, gives	$945 00
For one log house and well, and laying up fence,	200 00
For breaking up six hundred acres, (allowing remaining forty for bad spots, enclosures, &c.,) at $2 25,	1,350 00
Allow for contingencies,	30 00
	$2,525 00

Making not quite $4 per acre, costs, including buildings, &c.

Second Estimate for three hundred and twenty Acres.

Three miles, or 960 rods, at 20 rails per rod, gives 19,200 rails.	
Add for enclosures, cribs, &c. 1,300; total of rails, 21,500, at $35, gives	$752 50
For well, laying up fence and one house,	175 00
For breaking three hundred acres, (allowing remaining twenty for enclosures, &c., at $2 25, gives	676 00
Add for contingencies,	25 00
	$1,628 50

Making near $5 per acre.

The above calculations may vary a few cents per acre, owing to slight fluctuations in price of laborers. One hundred acres will cost about $6 50 per acre, same buildings, &c.; and eighty acres will cost about $8 30 per acre, same buildings, &c.

I have found no difficulty in renting one hundred acres of land, fenced, at $2 50 per acre. The tenant made a handsome sum by the lease. It is common to hire land that is fenced or has been broken up, and give one third of the crop delivered in the crib or barn.

You will perceive the profit on one hundred acres, 40 bushels of corn is a small crop; 75 to 80 bushels a good one; one hundred acres, at 40 bushels, will yield 4,000, one third of which is 1,333 bushels, which, at 25 cents, is $3 33 per acre.—When the canal to Lake Erie is made, the price will be double; 30 bushels of wheat, is a fair crop; one third, 10 bushels, is equal, at present prices, to $12 50—deduct expenses, it will be $6 per acre; one half of the grass crop would be a fair proportion for the landlord, equal to one ton, which will be worth on the land $8, and deduct $1 for pressing, will leave $7 profit per acre, which will be doubled by carrying to New-Orleans.

Many farmers raise a sod crop, by dropping corn in the furrows when ploughing is done; sometimes this succeeds well, but there is too much uncertainty about it to make definite calculations. As a general remark, I would observe, that the first two crops will pay for the land, at government prices, fence the same and plough it, and on 320 acres, build a house worth $200. The land will sell readily at $10 per acre, if improved. Yours, respectfully,

E. A. ELLSWORTH.

To HON. H. L. ELLSWORTH,
Washington City, D. C.

Danville, Nov. 12, 1836.

DEAR SIR—

Your favor of August 30th, was duly received; and in answer to your inquiries, I can say, that:

1. "Does your prairie land bear good wheat?" None can hardly be better.

2. "How is the best way to improve prairie land?" By ploughing it in the months of May, June, and July, with a plough peculiar to this country, which cuts a furrow two feet wide, and commonly three inches deep, upon which sod, corn, oats, wheat, and most kinds of grain, grow well the first year, and with no farther labor in ploughing.

3. "How much wheat, corn, or oats, do you realize per acre?" The first year or so, of wheat, commonly thirty bushels; oats, forty bushels; corn, 30, &c., &c.—The second year more of corn and oats, and not much of wheat.

4. "Do sod crops do well?" They generally are fine, in a good season.

5. "How much grass on an acre?"—I can't say, but over two tons, when well set.

6. "Can blue grass be harrowed in on the turf?" It can, and does well.

7. "Can herds grass also: is this the best way?" It can also, and this is the best way.

8. "Is your country good for hogs?"* Not so good; it is too cold—yet there is good pork made here.

9. "Can you keep cattle on blue grass?" They are kept by some all winter on blue grass, if snow is not too deep.

10. "Is your prairie good for beets?" It is the best for all garden stuff, that I have ever seen, and there can be none better.

11. "Is there coal near you?" The coal beds here are inexhaustible; they are found almost on every considerable creek, and perhaps as much in Vermillion county, as any in Illinois.

12. "What is the price of cattle now?" About $4 per cwt., and higher now than formerly, owing to the great emigration and demand for them; and from the rapid settlements, they will not be lower, most likely, for years.

13. "How do ditch and turf fences do?" As yet, I have seen none upon the right plan; but a ditch and sod sown with blue grass, I have no doubt will answer every purpose, instead of fence.

14. "What is the comparative expense of rail fence and ditching?" That depends upon the distance you haul the timber.—But ditching may, by proper arrangements, be done cheap.

You ask me farther, whether I can furnish blue grass seed? I can, to the amount of sowing two hundred acres per year, price $1 per acre. This seed can also be got at Louisville and Cincinnati.

You have the goodness to say, that I may add any information in my possession. I do it cheerfully, believing that we have one of the finest countries in the United States. My experience here in farming has been not inconsiderable.

The prairie grass is an excellent substitute for tame grass, if it is well cured, and cut early. This grass, early in the spring, is equal to any pasture in the old States, and some have said better; but when it becomes hard, in August and September, it is of little or no account. A man and two horses can plant and tend forty acres of corn on the prairie, when the sod is well rotted; and, as an average crop, there will be fifty bushels per acre, and sometimes more. Oats grow finely, and yield from fifty to seventy bushels, on ground well tended. I think, also, there is no country superior to ours for hemp and tobacco; at

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* Reference is here made to the *prairies*, which have no shelter for hogs. In the woods adjoining, hogs live all winter on mast, and thrive well. The Wabash valley is famous for its hogs. I have kept a large herd of swine this past summer on the prairie. Timber will soon be planted, or sheds built, and then pork can be most easily raised on these lands.—H. L. E.

least, none of the southern states in which I have been.

Sheep do as well here as in Kentucky, even on the prairie grass. I need hardly add, that this country is peculiarly adapted to the raising of mules, horses, and cattle, and they can be raised cheaper here than any state in which I have been, fifty per cent. at least I will say.

Fruit trees that I have tried, have grown remarkably thrifty, and, perhaps, faster than in most countries—which is the case of all trees. I have grown, from the seed, black and honey locust, sugar and walnut trees, ash and hickory—that of nine years' growth, is nine inches in diameter. My pear trees, about nine inches long when planted, produced fruit the sixth year.—My apple trees, from the seed, produced the fifth year; and some of the trees this year, (the ninth year, yielded me twenty bushels to the tree. I will not forget to mention, that flax also is luxuriant in its growth here.

You have said that you have the sugar beet seed, and proffer to send me a few, which will be most acceptable. I would like some of the hedge thorn for experiment also.

I live adjoining your land, and have eight persons in my family, and during this, and for years past, have had none sick in my family. This perhaps, comprises all you may wish to know about our delighted country.

I have the honor of being yours, &c.,

JAMES NEWELL.

To Hon. H. L. Ellsworth,
Washington City, D. C.

For the New-York Farmer.

APPLICATION OF STEAM TO AGRICULTURE.

Hitherto Agriculture has received little advantage from labor-saving machines compared with that which has been rendered to manufacturers and the mechanic arts; and although many of the implements of agriculture have been greatly improved, especially those great implements, the plough and the thrashing machine, the toil of human hands is still in full requisition; and as great an amount of animal labor as ever, is demanded on our farms. By what means this is to be materially lessened does not at present appear; but when these inventions and discoveries shall have been made, of which at least we will indulge a hope as not being distant, we shall perhaps then be as much surprised at the simplicity of the invention as were the companions of Columbus at his method of causing an egg to stand upon the small end. Professor Renwick lately deceased,* to the great regret of the friends of science, had made considerable progress in the application of steam to the purposes of ploughing, though we are ignorant of the particulars of his invention; in England they seem to have advanced in this matter, with considerable success, as appears from some accounts given in one of the late numbers of the British Farmers Magazine, from which we copy the following remarks.

"That the steam-engine would, at no very distant day, supply the place of animal labor in agriculture; and become as mighty an instrument in augmenting the productiveness of the soil, as it has proved in creating and economising manufactures, in navigating the ocean, and in travelling on land, was many years since predicted by Franklin (?) a prediction reiterated by Davy; and latterly acknowledged and enforced, as a great desideratum in science by many distinguished agriculturists. The successful application of Mr. Heathcoat's invention to the culture of bogs, the most repellent and obstinate of waste lands, leaves no room to doubt its applicability to soils already in cultivation. Coals are now procurable throughout Great Britain at prices, which have caused the steam-engines to be extensively introduced as a substitute for animal labor in many of the processes connected with agriculture.—Threshing, cleaning, grinding corn, chaff-cutting, and turnip-slicing, &c., are now performed by small engines, fixed on farm premises; even the churn has its steam-engine, managed by the dairy maid; and so great is the advantage arising to the dairy farmer from the regularity of motion; and economy produced by it, that hundreds of small engines, for this simple purpose alone, are used in the north of England and Scotland. But these are humble savings, compared with the benefits to be derived from the vast steam power, which may be applied to the soil itself. Those agriculturists who are acquainted with the effects produced by the valuable sub-soil plough, recently invented by Mr. Smith of Deanston, will readily appreciate the importance of an invention, which will enable them to employ that kind of plough at a much diminished cost per acre. Mr. Smith's plough, with steam-power, will effect a re-revolution in agriculture. Implements of husbandry have hitherto been restricted, in form, weight, and dimensions, to the management of a team of horses. A new class of instruments will take their place. The stiffest soils may be broken up, and pulverised to any desired depth; strong clays, the natural wheat lands, may be profitably cultivated, rendered more fertile, and fitted to bear a better, and more systematic rotation of crops.

Such are a few of the benefits, which land owners and agriculturists will derive from this substitution for animal power in husbandry. It is also no slight advantage, in a national point of view, that this important change will be effected, unaccompanied by any of those temporary evils, which too frequently attend the application of mechanical discoveries to existing arts. This invention will not displace a single individual from his accustomed healthy occupations; it will, on the contrary, occasion new and increased employment for agricultural laborers: it will restore to the support of man a considerable share of that large amount of produce, now sacrificed to the maintenance of agricultural horses; it will furnish employment to the rapidly increasing rural population of the empire, by rescuing millions of acres of bog and waste land from obnoxious sterility; it will find on their native soil multitudes of those Irish laborers, who annually emigrate to Great Britain in search of work and food; or who are forced with numbers of our own countrymen to prefer the dangers and hardships of emigration to wild and distant countries.

In the Mechanics' Magazine for July, there is a notice of a steam-plough, projected by Mr. Dickson, who has no doubt of its efficacy to plough all sorts of land, and adds that portable steam-ploughs will ere long be going about, and undertaking to plough for whomsoever may desire their assistance; and with very little more preparation than is now required to place a portable thrashing machine." An Edinburgh news-paper, states, that "Mr. Craig of that city, has taken out a patent for an American steam-plough, which costs much less than Mr. Heathcoat's, but probably is not sufficiently powerful for bogs. From our knowledge of the business of a farm the only objection we have to a steam-engine in such an establishment is, that it cannot do every thing. For all purposes, where horses cannot or should not walk, as on many descriptions of bog, a steam-plough may answer well; and there is no doubt that old arable land may be properly ploughed with steam-power; but would it also take the corn to market and do all other kind of road work. Would it carry out dung; and carry corn to the barn, or hay to the rick yard? If not then some draft horses must be kept; and if there be not a full complement, such work would go on very slowly and unsatisfactory."

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* The Report of Professor Renwick's death was, happily unfounded. Eds. New-York Farmer.

rous inquiries by yourself, and others, relative to the improvement of wild lands, and especially prairies; the cost of cultivation; the quantity of crops; the market for the same, and the profits that may be expected, I have concluded to write you a general letter, to be used as might be thought proper. My knowledge is founded upon experience, having just completed a farm of eight hundred acres on the wild prairies.

The expense of breaking up the sod, is $2 25. This is a fixed price, and certain calculations may be made on it, wherever the land may be located. But a difference will exist in the cost of fencing, according to the distance the rails are carted. For the farm I have just fenced, the rails were hauled four miles. This distance will form the basis of my calculations. It is apparent that the cost of fencing will depend materially on the size and form of the area to be enclosed. An area of three hundred and twenty acres will cost much more than half of the amount required to fence six hundred and forty acres. The four sides of a half section are three miles; the two longest sides being one mile each, and the two shortest a half mile each. The four sides of a whole section, six hundred and forty acres, are four miles, requiring only *one quarter more fence* for *double* the quantity of land.

Twenty rails are allowed to a rod; this makes a "Virginia," or worm fence, eight rails high—the eighth rail (called a rider) being elevated twelve or eighteen inches from the seventh rail, and resting on crotches, (eight feet long,) crossing at each corner of the "worm." Rails of ordinary size, laid in this manner, make a durable and tight fence, over and through which no cattle or stock can pass.

First Estimate for improving six hundred and forty Acres.

Four miles, or 1,280 rods, 20 rails to the rod, gives 25,600 rails.	
Add for enclosures, cribs, &c. 1,400 rails; total of rails is 27,000, which, at $3 50 per thousand, gives	$945 00
For one log house and well, and laying up fence,	200 00
For breaking up six hundred acres, (allowing remaining forty for bad spots, enclosures, &c.,) at $2 25,	1,350 00
Allow for contingencies,	30 00
	$2,525 00

Making not quite $4 per acre, costs, including buildings, &c.

Second Estimate for three hundred and twenty Acres.

Three miles, or 960 rods, at 20 rails per rod, gives 19,200 rails.	
Add for enclosures, cribs, &c. 1,300; total of rails, 21,500, at $35, gives	$752 50
For well, laying up fence and one house,	175 00
For breaking three hundred acres, (allowing remaining twenty for enclosures, &c., at $2 25, gives	676 00
Add for contingencies,	25 00
	$1,628 50

Making near $5 per acre.

The above calculations may vary a few cents per acre, owing to slight fluctuations in price of laborers. One hundred acres will cost about $6 50 per acre, same buildings, &c.; and eighty acres will cost about $8 30 per acre, same buildings, &c.

I have found no difficulty in renting one hundred acres of land, fenced, at $2 50 per acre. The tenant made a handsome sum by the lease. It is common to hire land that is fenced or has been broken up, and give one third of the crop delivered in the rib or barn.

You will perceive the profit on one hundred acres, 40 bushels of corn is a small crop; 75 to 80 bushels a good one; one hundred acres, at 40 bushels, will yield 4,000, one third of which is 1,333 bushels, which, at 25 cents, is $3 33 per acre.—When the canal to Lake Erie is made, the price will be double; 30 bushels of wheat, is a fair crop; one third, 10 bushels, is equal, at present prices, to $12 50—deduct expenses, it will be $6 per acre; one half of the grass crop would be a fair proportion for the landlord, equal to one ton, which will be worth on the land $8, and deduct $1 for pressing, will leave $7 profit per acre, which will be doubled by carrying to New-Orleans.

Many farmers raise a sod crop, by dropping corn in the furrows when ploughing is done; sometimes this succeeds well, but there is too much uncertainty about it to make definite calculations. As a general remark, I would observe, that the first two crops will pay for the land, at government prices, fence the same and plough it, and on 320 acres, build a house worth $200. The land will sell readily at $10 per acre, if improved. Yours, respectfully,

E. A. ELLSWORTH.

To HON. H. L. ELLSWORTH,
Washington City, D. C.

Danville, Nov. 12, 1836.

DEAR SIR—

Your favor of August 30th, was duly received; and in answer to your inquiries, I can say, that:

1. "Does your prairie land bear good wheat?" None can hardly be better.

2. "How is the best way to improve prairie land?" By ploughing it in the months of May, June, and July, with a plough peculiar to this country, which cuts a furrow two feet wide, and commonly three inches deep, upon which sod, corn, oats, wheat, and most kinds of grain, grow well the first year, and with no farther labor in ploughing.

3. "How much wheat, corn, or oats, do you realize per acre?" The first year or so, of wheat, commonly thirty bushels; oats, forty bushels; corn, 30, &c., &c.—The second year more of corn and oats, and not much of wheat.

4. "Do sod crops do well?" They generally are fine, in a good season.

5. "How much grass on an acre?"—I can't say, but over two tons, when well set.

6. "Can blue grass be harrowed in on the turf?" It can, and does well.

7. "Can herds grass also: is this the best way?" It can also, and this is the best way.

8. "Is your country good for hogs?"* Not so good; it is too cold—yet there is good pork made here.

9. "Can you keep cattle on blue grass?" They are kept by some all winter on blue grass, if snow is not too deep.

10. "Is your prairie good for beets?" It is the best for all garden stuff, that I have ever seen, and there can be none better.

11. "Is there coal near you?" The coal beds here are inexhaustible; they are found almost on every considerable creek, and perhaps as much in Vermillion county, as any in Illinois.

12. "What is the price of cattle now?" About $4 per cwt., and higher now than formerly, owing to the great emigration and demand for them; and from the rapid settlements, they will not be lower, most likely, for years.

13. "How do ditch and turf fences do?" As yet, I have seen none upon the right plan; but a ditch and sod sown with blue grass, I have no doubt will answer every purpose, instead of fence.

14. "What is the comparative expense of rail fence and ditching?" That depends upon the distance you haul the timber.—But ditching may, by proper arrangements, be done cheap.

You ask me farther, whether I can furnish blue grass seed? I can, to the amount of sowing two hundred acres per year, price $1 per acre. This seed can also be got at Louisville and Cincinnati.

You have the goodness to say, that I may add any information in my possession. I do it cheerfully, believing that we have one of the finest countries in the United States. My experience here in farming has been not inconsiderable.

The prairie grass is an excellent substitute for tame grass, if it is well cured, and cut early. This grass, early in the spring, is equal to any pasture in the old States, and some have said better; but when it becomes hard, in August and September, it is of little or no account. A man and two horses can plant and tend forty acres of corn on the prairie, when the sod is well rotted; and, as an average crop, there will be fifty bushels per acre, and sometimes more. Oats grow finely, and yield from fifty to seventy bushels, on ground well tended. I think, also, there is no country superior to ours for hemp and tobacco; at

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* Reference is here made to the *prairies*, which have no shelter for hogs. In the woods adjoining, hogs live all winter on mast, and thrive well. The Wabash valley is famous for its hogs. I have kept a large herd of swine this past summer on the prairie. Timber will soon be planted, or sheds built, and then pork can be most easily raised on these lands.—H. L. E.

least, none of the southern states in which I have been.

Sheep do as well here as in Kentucky, even on the prairie grass. I need hardly add, that this country is peculiarly adapted to the raising of mules, horses, and cattle, and they can be raised cheaper here than any state in which I have been, fifty per cent. at least I will say.

Fruit trees that I have tried, have grown remarkably thrifty, and, perhaps, faster than in most countries—which is the case of all trees. I have grown, from the seed, black and honey locust, sugar and walnut trees, ash and hickory—that of nine years' growth, is nine inches in diameter. My pear trees, about nine inches long when planted, produced fruit the sixth year.—My apple trees, from the seed, produced the fifth year; and some of the trees this year, (the ninth year, yielded me twenty bushels to the tree. I will not forget to mention, that flax also is luxuriant in its growth here.

You have said that you have the sugar beet seed, and proffer to send me a few, which will be most acceptable. I would like some of the hedge thorn for experiment also.

I live adjoining your land, and have eight persons in my family, and during this, and for years past, have had none sick in my family. This perhaps, comprises all you may wish to know about our delighted country.

I have the honor of being yours, &c.,

JAMES NEWELL.

To Hon. H. L. Ellsworth,
Washington City, D. C.

For the New-York Farmer.

APPLICATION OF STEAM TO AGRICULTURE.

Hitherto Agriculture has received little advantage from labor-saving machines compared with that which has been rendered to manufacturers and the mechanic arts; and although many of the implements of agriculture have been greatly improved, especially those great implements, the plough and the thrashing machine, the toil of human hands is still in full requisition; and as great an amount of animal labor as ever, is demanded on our farms. By what means this is to be materially lessened does not at present appear; but when these inventions and discoveries shall have been made, of which at least we will indulge a hope as not being distant, we shall perhaps then be as much surprised at the simplicity of the invention as were the companions of Columbus at his method of causing an egg to stand upon the small end. Professor Renwick lately deceased,* to the great regret of the friends of science, had made considerable progress in the application of steam to the purposes of ploughing, though we are ignorant of the particulars of his invention; in England they seem to have advanced in this matter, with considerable success, as appears from some accounts given in one of the late numbers of the British Farmers Magazine, from which we copy the following remarks.

"That the steam-engine would, at no very distant day, supply the place of animal labor in agriculture; and become as mighty an instrument in augmenting the productiveness of the soil, as it has proved in creating and economising manufactures, in navigating the ocean, and in travelling on land, was many years since predicted by Franklin (?) a prediction reiterated by Davy; and latterly acknowledged and enforced, as a great desideratum in science by many distinguished agriculturists. The successful application of Mr. Heathcoat's invention to the culture of bogs, the most repellent and obstinate of waste lands, leaves no room to doubt its applicability to soils already in cultivation. Coals are now procurable throughout Great Britain at prices, which have caused the steam-engines to be extensively introduced as a substitute for animal labor in many of the processes connected with agriculture.—Threshing, cleaning, grinding corn, chaff-cutting, and turnip-slicing, &c., are now performed by small engines, fixed on farm premises; even the churn has its steam-engine, managed by the dairy maid; and so great is the advantage arising to the dairy farmer from the regularity of motion; and economy produced by it, that hundreds of small engines, for this simple purpose alone, are used in the north of England and Scotland. But these are humble savings, compared with the benefits to be derived from the vast steam power, which may be applied to the soil itself. Those agriculturists who are acquainted with the effects produced by the valuable sub-soil plough, recently invented by Mr. Smith of Deanston, will readily appreciate the importance of an invention, which will enable them to employ that kind of plough at a much diminished cost per acre. Mr. Smith's plough, with steam-power, will effect a re-revolution in agriculture. Implements of husbandry have hitherto been restricted, in form, weight, and dimensions, to the management of a team of horses. A new class of instruments will take their place. The stiffest soils may be broken up, and pulverised to any desired depth; strong clays, the natural wheat lands, may be profitably cultivated, rendered more fertile, and fitted to bear a better, and more systematic rotation of crops.

Such are a few of the benefits, which land owners and agriculturists will derive from this substitution for animal power in husbandry. It is also no slight advantage, in a national point of view, that this important change will be effected, unaccompanied by any of those temporary evils, which too frequently attend the application of mechanical discoveries to existing arts. This invention will not displace a single individual from his accustomed healthy occupations; it will, on the contrary, occasion new and increased employment for agricultural laborers: it will restore to the support of man a considerable share of that large amount of produce, now sacrificed to the maintenance of agricultural horses; it will furnish employment to the rapidly increasing rural population of the empire, by rescuing millions of acres of bog and waste land from obnoxious sterility; it will find on their native soil multitudes of those Irish laborers, who annually emigrate to Great Britain in search of work and food; or who are forced with numbers of our own countrymen to prefer the dangers and hardships of emigration to wild and distant countries.

In the Mechanics' Magazine for July, there is a notice of a steam-plough, projected by Mr. Dickson, who has no doubt of its efficacy to plough all sorts of land, and adds that portable steam-ploughs will ere long be going about, and undertaking to plough for whomsoever may desire their assistance; and with very little more preparation than is now required to place a portable thrashing machine." An Edinburgh news-paper, states, that "Mr. Craig of that city, has taken out a patent for an American steam-plough, which costs much less than Mr. Heathcoat's, but probably is not sufficiently powerful for bogs. From our knowledge of the business of a farm the only objection we have to a steam-engine in such an establishment is, that it cannot do every thing. For all purposes, where horses cannot or should not walk, as on many descriptions of bog, a steam-plough may answer well; and there is no doubt that old arable land may be properly ploughed with steam-power; but would it also take the corn to market and do all other kind of road work. Would it carry out dung; and carry corn to the barn, or hay to the rick yard? If not then some draft horses must be kept; and if there be not a full complement, such work would go on very slowly and unsatisfactory."

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manifest. This steam-plough of Upton's is worked by Upton's patent lever steam-engine and his air-furnace boiler. If a single shared plough, the space occupied by the entire machine will be four feet by ten feet; if for trench ploughing, the dimensions will be the same; if for ploughing two, three or more parallel furrows at once then the breadth and length will be about five feet by twelve. The work done by the trenching ploughing, will be equal to any spade husbandry; and that by the parallel shares will be found very superior to any horse ploughing; inasmuch as the ground will not be trod or rammed down by horses feet; and as the steerer and ploughman will ride on the machine, the land will be left as light and open as possible, and resemble that of garden culture. To the steam-plough a harrow, drill, and seed box can be attached, when requisite, and the entire operation performed at one going, when it is for the last ploughing, without trampling the soil. The spots left in the angles of the field by Upton's steam-plough will be smaller than by any horse plough, as the steam-plough will turn if a single share, in thrice the breadth and length of a common wheel-barrow; and if a three shared plough, it will turn in the space of a small one horse cart. The simplicity of construction and small number of parts composing this steam-engine and boiler, and the great safety and security of the latter, will prevent the necessity of frequent and expensive repairs, as the only parts of the apparatus liable to wear and tear are the plough shares, soles, coulters, and harrow tines, which will only require the same repairs as if drawn by horses. The engine and boiler are calculated to go 50,000 miles or more, before any repairs could be wanted, unless from accident or unfair usage; and whenever from long use, very much worn, if the boilers were to burst, it could only extinguish its own fire without injury to any person close to it. The plough will require one steady man to direct and steer it; and a tractable boy to attend the fire and turn the steam off and on occasionally, the engine being of the most simple and efficient construction. The water tank will require replenishing now and then; and perhaps fuel will be required two or three times in the course of the day; and the boiler is admirably constructed for burning either wood, peat or coke, or coal may be used. The single plough is calculated to do two acres per day. The double plough will do four acres; and the three shared plough will do six acres. The counter or trench plough would do about ten acres per day; but as it would be equal in power to the double shared plough, it would require the same quantity of fuel and expense.—The land cultivated by this plough would doubtless be found, from its efficiency, to produce crops nearly if not quite equal to spade husbandry, with which mode of husbandry I am thoroughly acquainted from practice; and in such case it would pay for the steam the first season."

Such are the accounts, which are given of these great inventions, upon authority, which must certainly be deemed respectable. We may be excused for remaining in some degree incredulous, as to the extraordinary advantages, which are here predicted to be brought about by them. At the same time it would imply a very gross self-esteem to say that no further improvements in this matter can be made; and an unwarrantable distrust of the testimony of other men, though they may be interested parties, to pronounce all there statements fictitious and visionary. We have no doubt that very great improvements in these matters are in progress; and after witnessing the wonderful and almost miraculous results of mechanical ingenuity and skill as applied to other of the arts within a few years past, we indulge the sanguine hope that great things are yet to be realized in this most important of all arts, agriculture, which even our dreams have not anticipated.

Our common ploughs have within a few years passed through most valuable improvements. The use of the cast iron plough has greatly reduced the expenses of their construction and repairs, and has already saved millions of dollars to the farmers in the country. The improved construction of the ploughs has likewise greatly reduced the power required for the draft, and the work is much better executed than formerly. In this matter however great improvements are still desirable.—The manner of our executing our work in general is wretchedly slovenly: and bears no comparison to the ploughing of the Scotch and English laborers. This in part is to be ascribed to the division of labor among them, where a ploughman is only a ploughman, and trained exclusively to this business from his childhood. With us it is not so; but we may hope that these fine examples of work, which these emigrants often set before us, together with the great improvement in the instrument itself, will stimulate to a more vigorous and successful emulation.

H. C.

PLOUGHING MATCH.

The ploughing match, for the purpose of testing the comparative merits of several ploughs which were exhibited at the Fair of the American Institute last fall, was witnessed by a numerous assemblage of gentlemen, on the farm of General Johnson, near the Wallabout, Long Island, on Friday 28th of April. The arrangements of the committee for this trial were well made; the ground selected unsurpassed by any other field in the country, for such a purpose, having been cultivated by its present venerable, and highly respectable proprietor, and his immediate ancestors, for *more than two centuries*, and now in a high state of cultivation; the teams good, and the day as bright and as fine as could be desired; and of course the exhibition was interesting, and highly gratifying to those who witnessed it.

There were five ploughs on the ground which were used, only four of them however, came from the Institute; the fifth belonged to Mr. Wyckoff and was tried with the others for his satisfaction.

The ploughs used were arranged in the field and tried as follows—viz:

1st. "Dutcher's Patent castiron Plough."

2d. Mr. Wyckoffs plough, also cast iron, "Steven's Patent."

3d. "Weaver's Patent cast iron Plough," from Baltimore.

4th. "Dysdale's *Iron*," or rather as it is usually called, "Scotch Plough"—being *entirely* of iron; and

5th. "Miner and Horton's cast iron Plough," from Peekskill, N. Y.

These ploughs were all held by the judges and many other gentlemen, both practical and unpracticed farmers; and most of them performed quite as well as could have been expected, considering their condition, which was by no means suitable for the objects of the trial. No plough, however good it may be when used sufficiently to become smooth and bright, can be properly appreciated and judged of from a first trial; and any plough maker who risks the character of his work in that condition, with a view of testing its comparative merits with other ploughs, deserves, at least disappointment, if not defeat.

The gentlemen who acted as judges were every way competent to decide upon the relative merits of the ploughs. They tested them fairly, and decided justly, according to their performance; and no one interested in the decision, if disappointed, has, in our opinion, cause to complain of any thing except his own want of preparation.

The award of the judges, after mature consideration, was as follows:

"The undersigned committee, appointed by the American Institute, critically to examine the several Ploughs exhibited, and put into operation on the farm of General Jeremiah Johnson, at the Wallabout, report—

That on such examination they do unanimously agree, and decide that the yellow plough of Josiah Dutcher is the best, and that the plough of Minor and Horton is the second best, both as to their structure and operation. The committee would further state that the plough brought and tested by Mr. Wyckoff, although not within the province of the committee to decide upon, is deemed equal to the second best,—Dated at the Wallabout, this 28th day of April, 1837.

LEFFERT LEFFERTS,
JOHN WYCKOFF,
GERRIT KOWENHOVEN,
NICHOLAS N. WYCKOFF,
JAMES CROPSEY,
JEREMIAH LOTT."

By this report it will be seen that number 1, took the first premium, and number 5, the second—number 2, being equal to number 5, but not entitled to compete for the premium, as it was not exhibited at the Fair of the Institute. Number 3, and 4, were not mentioned in the report,—number 1, or *Dutcher's* plough, was in good condition for work, had a good team and performed admirably.

Number 5, or *Minor and Horton's* plough was not in good condition, being rough, and *without coulter*, except a sort of Rhinoceros horn, or cutter, extending up from the *share*, and its real merits were not generally appreciated. If it had been as well prepared for action as number 1, it would have stood an equal, if not the best, chance for the first premium.

Number 2, or Mr. Wyckoff's plough was in perfect order and by many persons deemed the best in the field.

Number 3, or "*Weaver's* plough" was by no means in proper condition for use. It was rough, and like number 5, with-*out* coulter, and *with* the *horn* projecting upwards from the share. This plough has an apparatus under the back end of the beam, where it comes in contact with the handle, for regulating its work. Mr. Weaver, the maker, was not present, and the only gentleman who had used it, and who properly understood the regulation of it, was obliged to leave the exhibition before it had had a proper trial, and therefore its merits were not duly appreciated. We have however great confidence in this plough, and do not doubt but that it will be found, when properly tested, a valuable implement. We have been informed by a gentleman who has given it a fair trial—having *three* of them in use on his own farm, that it is *superior* to any plough he ever held; and we can only again remark that when a person desires to test the merits of a *machine*, or *invention*, he must, if he would succeed, have it in *order* for competition. A plough can no more easily make good work, in a *rough* state, than a horse can make good *time* when taken from the plough to the race course.

Number 4, the "Scotch, or Drysdale, plough," made entirely of *iron*, with handles projecting far behind, found little favor except with those who had been accustomed to its use. It made good work—yet not equal to the others, and was omitted in the Report of the judges.

After noticing in detail the Ploughs, it may be proper to mention those who distinguished themselves as *ploughmen*. The judges of course, were most conspicuous—they all displayed both skill and judgment—yet to *Gerrit Kowenhoven, Esq.*, whom we heard say that he had followed the plough more than *forty years*," we must yield the palm. He was indeed master of the art. There were many others with whom we were unacquainted, who needed no label on their hats to indicate their pursuits—even a casual observer might read, in their manner of handling the implements, their honorable calling. The greater number of those who aspired to, and enjoyed the honor, of "guiding the plough" were unskilled in, or at least for a *long time* unused to, the business. There were those however, of this number who did themselves much credit, and the work justice. The most and persevering industrious, of those present, was the veteran editor of the Commercial Advertiser, with "frock and trowsers"—who, although for many years more familiar with driving the quill than either oxen or mules, displayed to the satisfaction of all, the powerful effects of early impressions, so deeply indeed, are his early agricultural habits seated that even the "aristocratic notions," which he is sometimes *accused* of having imbibed by a residence in New-York, could not keep him from testing every plough on the ground, and ploughing more than any other man present.

After a full and satisfactory trial, in which several acres were "turned up" and many more trodden down by the multitude present, the company adjourned.

The field labors of the day ended, those of the table commenced in due season, at the mansion house, near the lower Williamsburgh ferry—General JAMES TALLMADGE, president of the Institute, presiding, assisted by General Johnson. The fare was substantial, such as farmers are accustomed to, and there was enough of it. The chair having been called upon for a toast, General Tallmadge rose and addressed the company in an appropriate and effective manner, as will appear from the following brief sketch:—

Being called upon for a toast, he would ask the favor to precede it with a few remarks. He wished to express the thanks of the American Institute to the gentlemen and farmers who had given so numerous and respectable attendance this day, on the trial of the plough. It was an essential means and the true source of national wealth and prosperity. The ancients had the *cornucopiæ*, or horn of plenty, as their emblem of wealth, because they had attained only the *pastoral condition*. But we had made farther advance in agriculture, and the *plough*, as the means of agricultural wealth, was adopted by the Institute as the emblem of *plenty*.

He said a slight reference to historical events connected with the plough, and the spot on which we had been assembled—and the incidents associated with the early circumstances of the surrounding country, might be acceptable and somewhat curious. He would therefore state that the first plough which ever turned the American soil, was on the field which had this day been selected for the experiment by the Institute. The incident, after such intermediate events, was worth recollection. The Pilgrims of New-England had come to this country bringing with them little else but life—the love of liberty—and the desire of religious freedom. The Walloons who settled on the field where we are this day assembled, were first provided with the plough and a team—about 1622. The necessity and the early habits of those first settlers, induced them to cultivate their soil for a time with the hoe.

Tobacco was the leading object of cultivation, and the early records show a colonial law compelling, under penalties, persons to plant as many hills of corn as tobacco; and also, as a proof of the early protection and encouragement of domestic industry, giving bounties to "persons who should cross the *Spuytendeyvil*, make clearings and plant corn in the wilderness."

The colonial statute book now shows an act of the Legislature of 1708, giving bounties for killing *wolves* and *wild cats* in Kings county, and on the soil which we have this day been ploughing. But, Mr. T., said, the act was supposed, by some persons, not to extend to the ferocious animals called *shavers* which now infest Wall-street. But its directions to get rid of the "*young cubs*," as the *most mischievous*, were worthy of consideration.

In the same year (1708) an act was passed for the encouragement of *whaling*, off Sandy Hook, by the *Indians*, and privilege for them from arrest, with penalties, on any person who sold them liquor, or got from them any fishing tackle, going to or returning from their whaling voyages.

Mr. T., said the members of the Institute entered into all the sympathies of their fellow citizens under the pressure of the present hard times. Others would explain the causes of the present distress. That was not his purpose. But the Institute could tell the sufferers for want of money, a sure remedy. It was for farmers' boys, of all ages, from sixteen to sixty, to stick a little more to *the plough*. It has a wonderful power of creating wealth, and a proper and just encouragement and protection of its labor, will do more for the public good than the repeal of the treasury order, or even the friendship of Nic. Biddle.

The declared object of the American Institute was to encourage agriculture, commerce, manufactures, and the arts. It seemed to be a fit occasion to submit a few

facts bearing on those great sources of national prosperity.

Free trade objects to the protection of the home laborer of the country, and the manufacturer to be broken down, under the competitton of European labor.

Commentary—One and a half million of bushels of wheat have been imported the last year.

Woolens, about	20 millions
Cottons,	19 "
Silks,	18 "

The Institute says—we should use our own country, and our own labor to produce for our own wants. Before the act, repealing in part the system of protection, the importation of silk was eight millions—The last year it was eighteen millions.

1830, the free articles imported,	$12,700,000
The total importations,	70,000,000
1834, the free articles imported,	68,000,000
Total importations,	126,000,000
1835, the free articles imported,	77,000,000
1836, total importations,	180,000,000

The excess of importations over our exportations, was last year sixty-one millions—a balance of trade against our country, in a single year, nearly equal in amount to the whole metallic circulating medium. This balance is a constant drain of our specie currency—and needs no prophet to tell the causes of our monied distress. It leaves no doubt of the duty of the country to afford a just protection to its labor, and its agricultural and manufacturing productions, till it shall supply its wants, and thus with the exportations, shall be enabled to provide for the balance of trade, while it retains its circulating medium.

In conclusion, General T., begged leave to offer the following toast:

THE BADGE OF THE AMERICAN INSTITUTE.—The plough, the ship, the loom, and the eagle—as the emblems of agriculture, commerce, and manufactures, guided by the arts.

General JOHNSON, the Vice-President, having been called on for a toast, gave a sentiment in Dutch, to the memory of three eminent Walloons who first settled at the Wallabout, but whose names we cannot now repeat, as they were not taken down at the time, which we exceedingly regret, as the remarks and toast of the venerable descendant of the early settlers of the New Netherlands formed one of the most interesting incidents of the occasion—we may possibly give it hereafter.

WILLIAM L. STONE, Esq., having been callce upon by the chair, rose and spoke to the following effect:

MR. PRESIDENT—I rise cheerfully in obedience to your call, but, in doing so, I must beg you distinctly to understand that, although I ventured to challenge your Honor to compete with me in holding the plough, I shall not have temerity to attempt a competition with such a practised debater in speech making. In guiding the plough, I must persist in maintaining my superiority; in the art of eloquence, I cannot approach you by a fearful distance. There is, however, one point, Mr. President, in which I shall yet take the liberty of going beyond the chair. You have just been edifying and interesting us by some of the fruits of your antiquarian researches. You have not only been shaking the dust from the musty records of our early Dutch history, but have hastily glanced at some of your classic recollections of a yet earlier day. But, sir, before I have done, I intend to outstrip you in travelling backward.

We have met to day, sir, for an important object connected with the husbandry of our country. It happens, moreover, to be a very suitable season for such a festivity. It is a time closely corresponding with one of the great festivals instituted by the Greeks, and commemorated by the Romans, in the honor of Ceres, the fair goddess of corn and harvests, of potatoes and cauliflowers,—of mangel-wurtzel and ruta-baga. There were two festivals sacred to this divinity—the one in harvest time, in commemoration of the abduction of her beautiful daughter Proserpine, by Pluto, and the other at planting time, in memory of the mother's anxious search for her stolen daughter. These celebrations were kept with great spirit; and we are now assembled at the recurrence of the last mentioned festival.

Mr. President, I am somewhat partial to the celebration of festivals, and the indulgence of innocent recreations. I think that in this respect, the ancients were wiser in their generations than we. Relaxation of mind and body are necessary alike to the elasticity of both. We have all become utilitarians, and have not the time to spare for even rational amusements. Still, Mr. President, I cannot but think, that our ancestors who celebrated the appropriate festival of the harvest home—those who danced joyously around the May-pole, and twined the garland for the fair brow of the Queen of May—were, on the whole, a happier people than those of our own time. We are always laborious and care-worn. They had frequent seasons of throwing off their cares, and with light hearts could reinvigorate their constitutions, and reanimate their spirits, by rural sports among flowers, and groves, and fountains.

I have often, Mr. President, been charged with being an aristocrat, and I hope I shall not be treading upon the toes of the democracy, if I confess the charge to be true. I believe I am. Yes: I am in favor of an order of nobility—of which the husbandmen should be the members, and the plough the escutcheon. Sir, the calling of the husbandman is a noble one, and the farmers are the nobles of the earth.—"The sun," said the lofty souled Tecumseh, when asked by the American commissioners to seat himself in their tent, "is my father, and the *earth* is my mother, and I will repose upon her bosom." This was a noble tribute from one who had not yet emerged from the hunter state, in honor of those who draw their sustenance from the bosom of our common mother.

Perhaps, sir, it will be expected that I shall say something specifically on the subject of *ploughs*. But there would not be time to enter at large upon the history of the machine, and the many improvements they have undergone from the day of their invention, down to the fine little red plough that I have just been holding, made by the friend at my right, [Mr. Wyckoff]—for that I take to be, on the whole, the best on the ground. I will, therefore, speak of the first plough-maker—albeit a difficult matter to identify him to a certainty. I think, however, that Adam must have been the inventor. After he had forfeited his proud estate in Paradise—when horticulture and floriculture could no longer be his exclusive pursuits—he was driven forth to till the ground. He then became a farmer. And if he was as sensible and as ingenious a man, as I take him to have been—for he doubtless was a Yankee—he must have invented a plough. He would have been sadly wanting in sagacity and self-respect, if he depended upon the spade—and there were no Irishmen in those days—a circumstance inducing me to believe the spade was unknown. Be that as it may, however, the plough was an early implement in husbandry. It was acknowledged by Xenophon, and its merits were sung by Horace, Pindar and Virgil. There is, however, a hiatus in its history, from the days of Adam to those of TRIPTOLEMUS. This Triptolemus was a noble fellow—worthy in all respects to stand at the head of the order of nobility of which I have been speaking. His birth was illustrious, since, according to the beautiful mythology of the Greeks, he was the son of Oceanus and Terra—of the earth and ocean. Others, however, claim that he was the son of Celsus, King of Attica, by Neæreus, and was born at Eleusis. Hence the sublime Eleusinean mysteries, the nature of which it has puzzled so many of the modern learned to divine. He was doubtless a beautiful child, since he was adopted by Ceres, who took him to nurse at her own breast. She became so attached to him, that she undertook to divest him of all particles of mortality, by causing him to sleep upon beds of live coals—her own supernatural powers of course preserving him from harm. His mother, however, one luckless evening, having discovered that her little one was not lying upon a bed of roses, uttered such a shriek as to dissolve the charm, and prevent him from arriving at absolute purification from earthly matter by the process of fire. But the goddess determined still to do her best for the child, and watched an opportunity for his advancement.

I have already alluded to the rape of Proserpine, and the search of Ceres to find her. Pluto, to prevent being tracked, leaped into his own murky homestead, with his stolen bride, through the fountain of Cyane—and all trace of him would have been lost, but for the circumstance that the poor girl dropped her veil upon the margin. The anxious parent was three years upon the search, and on her return, found the agriculture of the world in a wretched condition. The fields, untilled, had grown up with thorns and briars. The fences were down—the gates and bars were out of order—the hedges wanted trimming—and the barn doors were off from their hinges. Indeed every thing, in farmer's phrase, "had gone to rack and ruin" during her absence. Finding the husbandry of the world in such a deplorable condition, she cast about for a professor of agricul-

ture, and designated Triptolemus for that important office. She taught him thoroughly in the art of husbandry—from the clearing and fencing, and draining of land, to the mixture of composts, and the more refined principles of husbandry adopted only by those acquainted with the science of agricultural chemistry. She then gave him her own chariot, and sent him, thus provided, and thus qualified, through the world, to resuscitate the great interest under her own peculiar administration.

In his travels through Scythia, Lyncus undertook to slay him—as a punishment for which the offended Goddess changed him into a lynx. He was accompanied in his travels by Bacchus—which shows that he paid some attention to horticulture—that he could twine the grape vine, as well as hoe the pumpkin—and also that he drank good wine if any. His name is derived from two Greek words, signifying *triple ploughing*—thus by his very name inculcating a lesson to farmers to till their lands well. Indeed, Mr. President, thorough and frequent ploughing is one of the most essential characteristics of a good farmer. Pliny recommends ploughing four times, and so do Virgil, Sir John Sinclair and Jesse Buel.

This mission of Triptolemus was most useful, not only to himself, but to the world. Agriculture revived under his judicious instructions—the farmers became rich by producing, instead of buying—and such was their gratitude, that in the end the foster-son of Ceres was called to the throne, and deified at his death. Thus, Mr. President, I have traced the noble origin of husbandry, and gone beyond you in antiquity. Allow me, in conclusion, to congratulate you, and the members of the American Institute, upon their alliance this day with the farming interest. The New-York Agricultural Society is numbered with the dead. So also, I believe, is the New-York Horticultural Society. Cannot, therefore, the American Institute extend its broad ægis, to some extent, over those important interests? I hope something may be done upon this important subject. In the mean time, permit me, Mr. President, to propose as a sentiment—

THE PLOUGH AND THE PRESS.—Essential alike to prevent the sterility of MATTER and of MIND.

By THADEUS B. WAKEMAN.—No repetition of modern free trade policy, importing grain to starve the people.

By ADONIRAM CHANDLER.—*Our Country's Industry*—Whether in ploughing the land or the ocean, whether at the loom, in the field, or in the workshop, it is alike entitled to the protection of a wise and justly administered government.

By S. JENKS SMITH.—Agriculture—the parent of commerce and the foster mother of mechanics.

By FRANCIS INGRAHAM.—The memory of the Ameriaan Farmer, upon whom the eries of the world have been turned in admiration—the farmer of Mount Vernon.

By Col. JESUP.—The farm of General Johnson and the ploughmen of the American Institute—they have this day seen that *Stone* is sometimes found on the best soil.

By Capt. SAMUEL C. REED.—The American plough—May its future *energies* and *industry* create a thorough barrier to the importation of foreign grain or breadstuffs in all time to come.

By Mr. WILLIAMS.—May those who *handle* the plough never get under the *harrow*.

By D. K. MINOR.—THE PLOUGH—Guided by practical knowledge, improved by the Press—through the medium of *agricultural publications*, a sure source of wealth when others fail.

The President of the day having retired, Mr. Stone rose and remarked, that he was about to offer a toast which he doubted not would be universally acceptable. He was about to propose the health of a gentleman with whom he had had the pleasure of an acquaintance for twenty years—a gentleman who was an eloquent and gifted member of the bar—who had adorned the halls of our State and national legislatures—who had presided with dignity in the Senate,—and who had reflected honor upon himself and country during his travels abroad, in most of the great European capitals. He had, moreover, shown himself a staunch friend to the great agricultural and manufacturing interests of the country. He begged leave, therefore, to propose—

"The health of the President of the American Institute, General JAMES TALLMADGE."

The toast was received and drunk with great enthusiasm.

A number of additional toasts and sentiments were given, and two or three speeches made, which have not been preserved. The festival was ended at "milking time," and the company from the city returned, just after the ruddy sun had sunk into a molten bed of amethyst and gold.

The report of the committee of the Massachusetts Legislature, referred to in Mr. Colman's communication, page 143, which was mislaid, came to hand again in time for this number, and it will be found well worth an attentive perusal.

From the New-England Farmer.

MASSACHUSETTS LEGISLATURE.

House of Representatives, Feb. 20, 1837.

REPORT AND TO ENCOURAGE THE MANUFACTURE OF INDIGENOUS SUGAR.

The Committee on Agriculture, to whom was referred the order of the House of Jan. 21st, "to inquire what measures, if any, are necessary to introduce and encourage in this Commonwealth the culture of the sugar beet," have taken that subject into consideration, and unanimously ask leave to submit the following

REPORT.

If we may credit statements that appear to be well substantiated, the culture of the sugar beet may contribute as largely to the improvement of our agriculture, as the turnip culture has to that of Great Britain; and if encouraged, will not only give our farmers a most valuable addition to their field products, but save to the State large sums of money annually paid out for foreign sugar.

On several accounts this culture merits particular consideration. As a cleaning crop, for the destruction of weeds and for pulverizing the soil, it is as effuctual as a naked summer fallow, without its attendant exhausting and pernicious consequences.—As an ameliorating or enriching crop, it will take the precedence of our most enriching grasses, in the same amount of vegetable matter returned to the soil, or product of nutritious food for any description of farm stock, and at the same time afford in sugar, a larger marketable value than the same land will produce of the exhausting crops of wheat or corn.

These facts will account for the enthusiasm with which this culture is regarded in France; and if true, fully sustain the opinion of your Committee that encouragement, for the growth of the sugar beet in Massachusetts, is dictated by sound wisdom, and eminently calculated to promote her agricultural interest.

It is believed that it will in some degree break the charm that rests upon old usages and customs, which are followed for the very substantial reason that they have been followed by generations past, and introduce a better and more enlightened system of rotation or alternation of crops; that it will dispel somewhat the prejudice existing against new plans or implements, or new modes of culture, by contrasting among our farmers, stronger than has yet been done, the superiority of improvement over antiquated notions; and by fertilizing his lands, increasing his various agricultutal products, and his ready capital, furnish both the farmer and his sons profitable employment at home, and stay the tide of emigration to the south and west,—our climate securing to us, in the beet an article of produce with which those regions probably cannot successfully compete.

The fact that our soil will readily produce beets, is within the experience of almost every farmer in the State, and there is no reason to doubt that, both in quantity and quality, it will give crops equal to the soil of France.

In 1830, the Massachusetts Agricultural Society awarded Mr. Gideon Foster, of Charlestown, a premium for one acre, yielding forty-three tons, nine hundred and sixty-one pounds of scarcity beet,—a variety, which, though not considered the best beet for sugar, is said to be extensively cultivated in Europe for that purpose. This crop, estimated by Mr. F. to cost $35 for cultivation, was very large, perhaps more than double the weight of those considered good crops in France, or that may be expected from ordinary good land and cultivation here, but still it shows what can be done. And as this is the only well authenticated account of the product of an acre exclusively of beets, cultivated in Massachusetts and known to the Committee, (although there may be many others,) they will make it the basis of some calculations to show the value of the beet culture; bearing in mind that this quantity of beets was given only by land in the highest state of cultivation, such as would probably give one hundred bushels of corn, or fifty bushels of wheat, in a favorable season.

Beets of good quality are said to contain ten per cent. of saccharine matter, capable of chrystalization. But in the present state of improvement in the manufacture, six pounds of sugar from 100 pounds of beets seem to be thought a fair estimate. From the same quantity of beets, after being submitted to the rasp and press, there remains also thirty pounds of pomace, and 60 pounds of pomace is considered a fair daily allowance of feed for a fattening ox. These estimates are from French authority, and however well or ill they may bear the test of experience in Massachusetts, we have at present no others from which to make our calculations.

Apply these estimates to Mr. Foster's crop of 43 tons and 961 pounds, and they will give 521 lbs. of sugar, and 434 days', or more than fourteen months' feed for a fattening ox. The value of this feed, and the means it will furnish for enriching his soil will be seen at once by the farmer. Estimating a days' feed equal to one peck of corn, (the usual quantity given a fattening ox per day, in addition to hay,) and its value would equal 108½ bushels of corn. Add to this the 95 86-100 dollars ballance received of the manufacturer for the juice extracted,—which will amount to, estimating at the proportional difference at which they have been sold in France, the beets at $4 per ton and the pomace returned at $6 per ton—and also the great quantity of leaves and tops left on the ground cultivated, at least half equal to the dressing of manure, and it will not be very difficult for any one to see that the beet culture, if successfully introduced, will give thrift to the cultivator, and energy to the soil. If there is any crop cultivated by our farmers, which gives a return half equal to this, without exhausting the soil, it is not known to your Committee. It may be recollected also, that less than two thirds of the sugar is obtained by the present process, and improvements are constantly progressing.

The expense of manufacturing the sugar here, cannot be known until tested by expement; but we see no reason why it may not be manufactured here, after having been fairly within the scope of the Yankee ingenuity and enterprise, as cheap as in France. Such is found to be the case with heavy cottons, or substantial goods or wares of many kinds not requiring a great degree of extreme nicety and fancy, or of chemical knowledge in their manufacture.

The price of a days' labor is much less in France than here, but the difference in the price is probably not much greater than the difference in the effect of the labor; and if it were, the objection does no more forbid our raising beets than it does our raising other agricultural products, that are common to both countries.

By reference to the books of the custom-house in Boston, it will be seen that, exclusive of what was re-shipped, over twenty-six million pounds of foreigh sugar was imported into this city in one year ending September 30th, 1836, at an expense to the importing merchant, exclusive of freight, of nearly two hundred thousand dollars. From the foregoing estimate, it will be seen that it is possible to produce this amount of sugar from a tract of land less than three miles square.—This is shown to be possible, but not probable, at least until great improvements, such as we hope this culture will introduce, are made.

The possibility however of doing this, or any thing like it, or even half of it, may justly claim our most candid attention.

Two millions of dollars annually paid out of the State for a foreign product, which for aught we know can and eventually will, be raised cheaper with us than with them, is certainly matter for the grave consideration of legislators.

It is a subject permanent in its bearing, and assumes an importance, compared with which, many others that engage our liveliest attention, dwindle almost to insignificance.

Even the portion of the surplus revenue coming to Massachusetts, which has excited so much interest over the commonwealth, amounts only to about three-fourths the sum annually paid out by her citizens, for an article which her own soil might produce, without a whit's diminution of her present product. That this ascertion is even less than the truth, will eventually be demonstrated; if the facts stated in regard to the sugar beet culture are correct.

For years no subject of equal importance to our agriculture has presented itself; and well may it be said that the vital interests of the Commonwealth are neglected, if this culture is not encouraged.

Let those facts, so well established in France—that this culture returns to the soil in enriching matter, more than an equivalent for its heavy exactions, and at the same time affords ample returns for the labors of the cultivator and manufacturer, in a value that is not confined to the civilized world for a market;—become established here, and it is not easy to estimate all its advantages. Its enlivening influence will be felt in every department of domestic industry and trade; and it hardly requires the gift of prophecy to say the time will not be far distant when we can add a third staple to our exports of "rock and ice."

Sugar, from having been considered a luxury, is now an indispensible article of subsistence for the poor and the rich. Its production, cheap, and in abundance, from having been confined to the south, is now held out to the north; and shall we not with gratitude, accept the boon so unexpectedly offered us by a kind Providence, and aid its immediate culture, and secure its immediate benefits? or shall we leave it to the care of individual effort, and its benefits to those who succeed us in the active duties of life, if they shall be so fortunate as to possess the energy necessary to achieve its successful introduction?

The policy of giving encouragement for the introduction of a new staple, promising so much to enlarge the resources of agriculture, can hardly be questioned, or its necessity doubted. The farmer must depend upon the manufacturer for the sale of his beets, and the establishment of manufactories is a work of time. Experience, skill and implements, in the first place, must come from abroad, and be imported at considerable expense, or a course of experimenting adopted, likely to be still more expensive if not ruinous. The various obstacles incident to, and almost inseparably connected with every new enterprise, and which in this case may be neither few nor small, must be overcome by the pioneers. This is well known at the outset; and under these circumstances, multitudes might believe, eventually, this would be a great and profitable business, and not an individual be found ready to break the ice and commence the manufacture; so likely is it to be prosecuted more successfully by those who stand by and take first lessons from the experience of others, who run the risk and lead the way.

On the other hand, however much this culture may promise of success and profit, and however well those promises may be fulfilled; is it on that account less worthy the patronage of the government? Surely not. It cannot be the policy of an enlightened government to extend liberal patronage only to those objects which promise a doubtful issue, but rather, if any are *encouraged* liberally, it will be those which promise to *repay* liberally.

In accordance with these views, the following Bill is submitted by order of the Committee.

William Clark, Jr. Chairman.

Improved Corn.—We take the following correspondence from the Newark (N. J.) Daily Advertiser, and commend it to our readers, as well worthy their attention. We have no doubt of the correctness of the theory that a selection of the fairest and largest of the crop for *seed* will produce a superior article; and that perseverance in that course will richly reward the husbandman.

Improving common Seed-Corn.—The following interesting correspondence has been furnished to us for publication by the Hon. *James Parker*, as containing information that may be useful to the Agricultural community. Mr. Ellsworth's circular was addressed to each member of Congress, with a sample of the corn of which Mr. Baden's letter speaks. We see no reason why his theory is not equally applicable to other seeds. It is certainly worthy an experiment—

Patent Office, Jan. 30, 1837.

Sir: Hearing of some great improvements that had been made in the common corn, I addressed a letter to Mr. Baden, a highly respectable gentleman in Maryland, to ascertain what facts I could on the subject.

His letter is very interesting, and I transmit you a copy of it. This experiment of Mr. Baden shows most clearly what can be done to *improve seeds, by carefully selecting each year the best kind raised.* Theoretical opinions sustain Mr. Baden: but few experiments have been tried so successfully. What might be effected for agriculture by similar efforts.

The like efforts in improving the breed of animals have been crowned with great success, especially in Europe. I avail myself of this opportunity to send you a small sample of the corn mentioned by Mr. Baden. I will only add, that I have conversed with several persons who have planted the "Baden" corn; and the concurrent opinion of all sustain the statements made in the let-

ter. I have a few samples at the Patent Office, of corn, raised in this neighborhood which has four and five ears on a stalk; and I expect soon some stalks, containing six, seven and eight ears. If this corn were generally introduced, how greatly the amount of bread stuffs might be increased, *without any extra labor*. I hope some public spirited citizens will try to improve wheat, oats, barley, and other grains.

I avail myself of the opportunity to mention the introduction of the Italian *spring wheat* with great success. A friend of mine, in Connecticut, raised the last year forty bushels on an acre. This grain is heavy; makes good flour; yields well; and the crop avoids all the danger of winter freezing. I have ordered a quantity of this corn and wheat to be shipped to Indiana, and intend to try both on the fine soil of the Wabash valley, the ensuing summer.

I am, yours, very respectfully,

HENRY L. ELLSWORTH.

N. B. Be careful to plant this corn in a place by itself. When good seed is planted in a field with poor seed, the former will degenerate.

H. L. E.

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[Copy of Mr. Baden's Letter.]

NEAR NOTTINGHAM, PRINCE GEORGE'S Co., Maryland, January 26, 1837.

Sir: I received yours of the 14th, making inquiry respecting the "*Maryland Corn*," which you understood I had raised. I have the pleasure to say that I have brought this corn to its high state of perfection by carefully selecting the best seed in the field for a long course of years, having especial reference to those stalks which produced the most ears. When the corn was husked, I then made a re-selection, taking only that which appeared sound and fully ripe, having a regard to the deepest and best color, as well as to the size of the cob. In the spring, before shelling the corn, I examined it again, and selected that which was the best in all respects. In shelling the corn I omitted to take the irregular kernels at both the large and small ends. I have carefully followed this mode of selecting seed corn for *twenty-two or twenty-three* years, and still continue to do so. When I first commenced, it was with a common kind of corn, for there was none other in this part of the country. If any other person undertook the same experiment, I did not hear of it; I do not believe others ever excised the patience to bring the experiment to the present state of perfection. At first, I was troubled to find stalks with even *two good ears* on them, perhaps one good ear and one small one, or one good ear and a "nubbin." It was several years before I could discover much benefit resulting from my efforts; however, at length the quality and quantity began to improve, and the improvement was then very rapid. At present I do not pretend to lay up any seed without it comes from stalks which bear four, five, or six ears. I have seen stalks bearing eight ears.

One of my neighbors informed me that he had a single stalk with *ten perfect ears on it*, and that he intended to send the same to the museum at Baltimore. In addition to the number of ears, and of course the great increase in quantity unshelled, it may be mentioned, that it yields much more than common corn when shelled. Some gentlemen in whom I have full confidence, informed me they shelled a barrel (ten bushels of ears) of my kind of corn, which measured a little more than six bushels.—The common kind of corn, will measure about five bushels only. I believe I raise *double or nearly* so, to what I could with *any other corn I have ever seen*. I generally plant the corn about the first of May, and place the hills five feet apart each way, and have two stalks in a hill. I can supply you with all the seed you may need, and I suppose I have now in my corn house fifty and perhaps more, stalks with the corn on them as they grew in the field and none with less than *four*, and some *six or seven*, ears on them. I will with pleasure send you some of these stalks, and also some seed corn, if I can get an opportunity.

Early last spring I let George Law, Esq. of Baltimore city, have some of this seed corn; he sent it to his friend in Illinois, with instructions how to manage it. A few weeks since he informed me that the increase was *one hundred and twenty bushels on an acre*; that there was no corn in Illinois like it, and that it produced more fodder than any other kind. I have supplied many friends with seed corn, but some of them have planted it with other corn, and will, I fear, find it degenerate.

I have lately been inquired of if this corn was not *later* than other kinds? It is rather *earlier*; certainly *not* later. Corn planted in moist or wet soils will not ripen so quick as that which is planted on a dry soil. In the former, there will be found more dampness in the cob, although the kernel may appear equally ripe in both. In the two last years, the wet seasons have injured much corn that was too early "lofted" or housed.

I believe I have answered most of your inquiries. I hope I have not exaggerated—I have no motive for doing so. I raise but little corn to sell, as tobacco is my principle crop. Should I fail to send you some seed this spring, I will next summer gather some stalks with the corn, fodder, and tassels, and all, as they grow, and send to you, that you may judge yourself of the superiority of this over the common kind of corn.

Yours, &c.

THOMAS N. BADEN.

Hon. H. L. ELLSWORTH,
Commissioner of Patents, Washington city.

The following extracts from the New. England Farmer will be found useful at this period of planting.

From the New-England Farmer.—April 19.

INDIAN CORN.

It is scarcely possible to suggest 'Hints to Husbandmen,' on this important crop, which have not been often placed before our readers. Still some advantages may accrue from mere repetitions of former directions, especially to young farmers, and recent subscribers to our journal.

Soil.—The soil for this crop should be light and somewhat sandy. Stiff clays, or cold and wet loams are improper.

Preparation.—Judge Buel says, "A young clover ley, one or two years old, is the best preparation for corn. No grass ley should be cross-ploughed for this crop. If the soil is tender, and the texture of the soil light, the ploughing and harrowing should immediately precede the planting. If the soil is old and tough, the ground should be ploughed the preceding autumn, and harrowed, and harrowed again on the eve of planting. The furrow slice should not be laid flat, as in this case the water, if in excess, reposes on the surface, but lapped, so that each furrow forms a sort of under-drain for the surplus water to pass off. The plough should be set, where the soil will admit of it, to turn a farrow six inches deep and eight or nine wide; the work should be well done, no bulks made, and the manure and grass completely buried, though an extra hand should be required. The *whole* ground should be turned over, that it may be broken and rendered pervious to the young plants. To *cut and cover* will not answer, as it breaks up and pulverizes but half the soil."

Seed Corn and its Preparation.—Judge Buel states that "the twelve rowed corn called the Dutton corn is the earliest for field culture that we know of, and we think it the best. We have raised it sixteen years, and the crop has never been injured by the early frosts. It has been widely disseminated, and seed, we presume, may be obtained in almost every county in the Northern States." This kind of corn is, probably, the same with the Lathrop or Phinney corn. There is also, an early sort of corn, of which a sample was left at the Seed Store of the N. E. Farmer, by Mr. Adams of Newbury, Mass., called the Clarke corn, see N. E. Farmer, vol. xv. p. 241. A sort of corn introduced by Hon. O. Fiske, is recommended by Capt. Coffin of Newburyport, N. E. Farmer, vol. xiii. p. 282. How many of these sorts are the same, or whether any of them are identical with others bearing different names, we cannot say, but most or all may be had at the Seed Store of the N. E. Farmer. With regard to the preparation of the seed, the practice of Judge Buel, as stated in the last Cultivator, "is turn upon the seed, the evening before planting, water nearly in a boiling state. This thoroughly saturates the seed, induces an incipient germination, and causes the corn to sprout quick. The next morning we take half a pint of tar for half a bushel of seed, put it into an iron vessel with water, and heat it till the tar is dissolved, and the liquid becomes tar water. It is than turned upon the seed and well stirred. It adheres to the grain, and gives it a thin transparent coating. The tar serves a double purpose; it prevents an excess of moisture entering and rotting the seed, if the weather or soil are cold and wet; and it preserves it from the depredations of birds, &c., which prey upon it. After the seed is taken from the steep, where we never leave it more than 15 hours, as much ground gypsum is mixed with it as will adhere to the kernels. The gypsum prevents the kernels from adhering to each other, and favors the after growth of the crop. Ashes or lime may be substituted for